

Exemption No. 9875

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

In the matter of the petition of

International Lease Finance Corp.

for an exemption from Special Conditions
No. 25-367-SC

Regulatory Docket No. FAA-2009-0041

GRANT OF EXEMPTION

By letter received December 31, 2008, Mr. Ozzie Chraibi, Vice President, Specification and Material, International Lease Finance Corp. (ILFC), petitioned the Federal Aviation Administration (FAA) for an exemption from the requirements of Special Conditions No. 25-367-SC, for seat installations on Boeing Model 777 series airplanes. If granted, the exemption would permit relief from the heat-release and smoke-emissions requirements for seats with large surface-area parts.

The petitioner requests relief from the following regulations:

Special Conditions No. 25-367-SC - Requires large, nonmetallic panels on seats to meet the heat-release and smoke-emissions requirements of 14 CFR 25.853.

Related sections:

Section 25.853(c) - Requires that specific large, interior panels comply with the heat-release and smoke-emissions test methods of appendix F, part IV and V.

The petitioner supports its request with the following information. This information is quoted from the petition.

International Lease Finance Corporation (ILFC) is taking delivery of two Boeing 777 series aircraft for operation with a European customer (Air Austral). The aircraft deliveries [serial number (S/N)] 35782 and S/N 35783 are scheduled for March and April of 2009.

The aircraft are to be outfitted with follow-on production models business class seats manufactured by SICMA. The business class seats were outfitted with new different colored leather and trimming, causing a part number change. The reason for this request is that at the time the parties completed key commercial design milestones, it was not understood that Notice 25-367-SC, dated February 7, 2008, would be applicable to these seats.

The Initial Technical Coordination Meeting for subject aircraft was conducted on 24 October 2007. All design requirements for this Business Class seat were established at this meeting. Additionally, a subsequent design freeze was conducted at the seat supplier on 17 April 2008.

Trim is used to finalize the design of the shell and avoid any potential sharp edges or damage due to luggage handling. Bumpers are used to avoid potential sharp edges and also protect the shell integrity from any damages. Handrail is designed to support a weight of 300 lbs, assisting any passengers to go out of the seat and maintaining the literature pocket which holds the safety instructions. To be compliant with [14 CFR] 25.853, SICMA looked for alternative material but experienced technical and lead-time issues due to the engineering complexity of those parts.

Current trims are produced in injected foam and are glued on the top edge of the shell. SICMA maintained an injected material due to the dimensional variability of the shell and a material which could absorb shocks. Bumpers are produced in injected foam. SICMA attempted to modify this part into a plastic design, but tests demonstrated that parts are quickly damaged. The parts are close to the aisle and are in contact with trolleys and luggage, and can be easily shocked.

Finally, [regarding] the handrail necessary for disabled persons: The current handrail is already a complex part – [a] mix of various materials – in order to provide enough strength to the handrail to support a load of 300 lbs in various directions. Air Austral seats are currently in production and scheduled to deliver on February 23, 2009.

25-367-SC Background

The forerunner of Notice 25-367-SC, Notice 25-358-SC in relation to Boeing 737 aircraft, pertained only to certification programs applied for after the commencement of the new rule. Both Boeing and SICMA, acting on the precedent set by this rule and based on the fact that previous Notices had been introduced in the same manner, planned programs on the basis that Notice 25-367-SC would incorporate a similar transitional mechanism. When released, Notice 25-367-SC designated an immediate commencement upon issue, and as a result our seat program, which had completed key commercial milestones including the critical design review, was caught by the rule.

Notice 25-367-SC imposes special conditions on aircraft with seats that incorporate large, non-metallic panels. The special conditions require these seats to meet the test requirements of parts IV (concerning heat release) and V (concerning smoke emission) of

Appendix F of 14 CFR part 25. Notice 25-367- SC, however, includes the following definition, which states:

Definition of Non-Traditional, Large, Non-Metallic Panel: A non-traditional, large, nonmetallic panel, in this case, is defined as a panel with exposed-surface areas greater than 1.5 square feet installed per seat place. The panel may consist of either a single component or multiple components in a concentrated area. Examples of parts of the seat where these non-traditional panels are installed include, but are not limited to: Seat backs, bottoms and leg/foot rests, kick panels, back shells, credenzas, and associated furniture. Examples of traditional exempted parts of the seat include: Arm caps, armrest close-outs such as end bays and armrest-styled center consoles, food trays, video monitors, and shrouds.

This definition creates the impression that seats with armrest-styled center consoles and certain other areas that incorporate large, non-metallic panels are exempt from the special conditions, and the FAA has published no guidance information that would lead the industry to believe otherwise.

No Adverse Effect on Safety

Since the special conditions do not correct an unsafe condition, this exemption would have no adverse effect on safety. Only aircraft associated with seat certification programs approved after February 20, 2008 (the effective date of the special conditions) are required to comply with the special conditions. The special conditions do not apply to aircraft having seats that were included in previously certificated interiors. Therefore, no safety concerns appear to affect these aircraft, which have seats that incorporate large, non-metallic panels, and which may continue to fly indefinitely without any required modifications.

The exemption would result in only 36 more seats being operated on only two aircraft, a minimal increase in the pool of aircraft with similar seats that have not undergone the required testing.

In light of the many models of seats already approved and in production without meeting the testing requirements, this exemption would not reduce the level of passenger safety.

ILFC understands the goal of the special conditions, which is to implement a long-term improvement in aircraft interior standards, and is preparing to comply with those requirements with regard to future aircraft.

ILFC believes that granting this narrow exemption for the aforementioned two aircraft would have no significant impact on safety, and would be fully consistent with the broader public interest.

Economical Impact

Air Austral is a small airline operating mainly between France and Reunion Island. With these 2 aircraft, the airline is introducing 2 new routes to Noumea and Sydney starting on April 11th. Without these aircraft, the airline growth and operations will be severely impacted.

Air Austral has already launched a marketing campaign to promote its new routes and has sold tickets to the public. A delay to the entry into service date of their new 777 aircraft will cause economical burden and impact the airline's reputation. The passengers holding tickets for the new routes will also be burdened.

Late Production Changes

ILFC and SICMA have made great efforts to make late design changes to comply with Notice 25-367-SC, and in the process have already replaced numerous seat parts that are in full compliance to Notice 25-367-SC. There remains a handrail (1.48 sq ft/pax) and seat trim (0.99 sq ft/pax) part attached to the seat that is not able to be replaced with new material due to maximum seat-weight limitations and production schedule to meet the aircraft delivery.

Following FAA and Boeing recommendations, the cup holder and cocktail table material was changed to Lexan material. The center console was also changed to Lexan while the seat back shell decor was changed from tedlar to a paint that meets the requirement put forth in Special Condition 25-367-SC.

Regrettably, SICMA could not change the composite handrails without increasing the seat weight and jeopardizing the seat on-dock date. Further to evaluating the potential options, SICMA cannot change the handrails to Lexan because Lexan is not strong enough for the handrail to maintain the 300-lb load. If a Lexan handrail is stiffened with a sturdy material, the seat weight will exceed Boeing maximum interface loads. Since this is a follow-on program that has already been already tested and certified, it would be cost-prohibitive to retest.

The handrail feature was designed following customers request to facilitate passenger shift into the outboard seat of the doubles or into the center seat for the triples. The handrails also facilitate passenger movement from his or her outboard seat to the aisle or from the center triple to the aisle. The handrail will also work as a support for disabled passengers and will assist in the event of an egress.

Exemption Requested from the special conditions imposed in Notice 25-367-SC

ILFC requests relief from the requirements of the special conditions imposed in Notice No. 25-367-SC to the extent necessary to permit Boeing to obtain certification under 14 CFR part 25 for the SICMA seats installed on two 777 aircraft (S/N 35782 and S/N 35783) to be delivered without complying with the heat release and smoke emission testing requirements of 14 CFR part 25, Appendix F, parts IV and V.

This exemption would be in the public interest, as it would permit thousands of passengers to complete their intended travel arrangements.

It is important to emphasize that ILFC, The Boeing Company and SICMA fully recognize the need to have future seats comply with the new requirements of the special conditions. To that end, all parties are actively engaged to ensure compliance in future 777 seating programs.

Federal Register publication

A summary of the petition was published in the *Federal Register* on March 27, 2009 (74 FR 13506, March 27, 2009). No comments were received.

The FAA's analysis

The FAA has reviewed the information provided by ILFC and has concluded that granting this exemption is in the public interest, for the reasons stated by the petitioner. However, a number of issues require further discussion.

Based on the petition, the FAA raised a few questions, which are listed below, as are the responses from ILFC:

1. The seats in question are identified as "follow-on seats with different color leather and trimming." Given that the seats in question are not factory new, please explain why the existing compliant seats (of the previously certified variant) cannot be substituted until such time as the proposed seat design can be made compliant. Please provide details.

ILFC Response:

The subject seats in question are factory new from SICMA Aero Seat, Zodiac Aerospace. Following the release of 25-367-SC, SICMA has made numerous re-design changes to best comply with 25-367-SC in the time remaining to meet the aircraft delivery schedule. The following design changes were incorporated late in the seat assembly process, using Lexan® material that complies with Title 14 CFR part 25, Appendix F, parts IV and V, heat release and smoke emission:

- (a) Center Console
- (b) Cocktail Tray Table
- (c) Seat Back Shell
- (d) Water Bottle Holder

The "follow-on" description was used to specify that the subject seats are based on existing seats in Boeing Model 777 series aircraft already in operation. These installed seats did not comply with 25-367-SC, either because they were installed prior to issuance of 25-367-SC, or because they delivered from the Boeing Company with a waiver from the State of Registry.

2. You state that the handrails are mechanically fastened to the seat backs. Please explain why:

- these parts cannot be removed from the seats, and closeouts installed.
- the handrails cannot be installed at a later date when a compliant solution is worked out.

ILFC Response:

Removing the handrail will eliminate the main purpose of its design, which is to facilitate the ease of passenger movement to and from their seat. Retrofitting/Replacing the handrail with compliant material at a later date may not be possible if compliant alternate material cannot be sourced and designed to meet required strength/loading. In addition, retrofit/replacement would be cost-prohibitive if seat re-testing and certification is required.

SICMA cannot change the handrails to Lexan because Lexan is not strong enough for the handrail to maintain the 200-lb load. If a Lexan handrail is stiffened with a sturdy material, the seat weight will exceed Boeing maximum interface loads. Since this is a follow-on program that has already been already tested and certified, it would be cost-prohibitive to retest.

The handrail feature was designed following customer's request to facilitate passenger shift into the outboard seat of the doubles or into the center seat for the triples. The handrails also facilitate the passenger move from his or her outboard seat to the aisle or from the center triple to the aisle. The handrail will also work as a support for disabled passengers and will assist in the event of an egress.

3. We find the purpose of the handrails to be a passenger convenience item. We suspect no reduction in the level of safety by removing the handrails from the seats. Please explain why the handrails are required from a safety standpoint. If the handrails are required, please explain why they could not be replaced with compliant parts in a reasonable time period, e.g., one year from now.

ILFC Response:

The handrail feature facilitates the storage of the Safety Instructions Card used by passengers. If removal of the handrail is mandated, then it will require a re-design to ensure the closeout panel provides means to store the required Safety Instructions Card. In addition, the handrail design feature was a direct airline/operator request to facilitate ease of movement by the passenger, hence maintaining the handrail will allow safe use by the flying public. In the event that compliant material can be used for the intended design without cost-prohibitive seat re-testing, we would support the recommendation (via Vendor Service Bulletin) for the operator to retrofit/replace the handrails.

4. Please provide a comparison of the weight of the "Lexan stiffened with sturdy material" handrail to the weight of the noncompliant-material handrail.

ILFC Response:

The current handrail part is a composite part reinforced by injected foam. An alternative design is the development of the literature pocket cover in Lexan XHR6000 and of a metallic handrail in aluminum. The weight difference has been estimated to: +0.5 lbs / pax (excluding back-shell reinforcement)

5. A retest was mentioned in the petition; please provide details of the nature of the retesting, e.g., static, dynamic, etc. Also, please explain excesses in detail, e.g., weight of seat exceeds that of static-test or dynamic-test article, local track-lip limits, floor-structure limits, etc.

ILFC Response:

The back-shell: The test set up of this component requires reinforcement of the back-shell to allow the aluminum handrail installation. The reinforcement is required to provide the ability for the handrail to support a load of 300 lbs.

The current back-shell design does not have metallic reinforcements/inserts in such locations and would require a complete new production which is cost prohibitive. A new back-shell design includes engineering, prototype back-shell, static rig test, and production of a new batch.

6. The two aircraft in question appear to be intended to be operated outside the United States. Per 14 CFR 11.83, please request this, if this is the case, and provide the reason(s) for operation outside the United States.

ILFC Response:

Air Austral is a French airline operating mainly between France and Reunion Island. The aircraft will be registered in France. Air Austral has concurrently requested a waiver from the European Aviation Safety Agency (EASA) for the two aircraft. In the event the aircraft transfers to another operator or registry, the State of Registry will require compliance to the State of Design type-certification basis, hence the exemption will support the future transfer of the aircraft.

The FAA acknowledges that SICMA has made numerous re-design changes to various parts on the seat with the intent to show compliance with the special conditions. We understand that the seats are based on a previous design, but have significant changes and are factory new and unique to this operator in terms of trim and finish.

We agree with the petitioner that the handrail design also serves the purpose of holding the pre-flight briefing safety card, and as such, cannot simply be removed for the sake of compliance. A redesign of the seat at this point would not only be costly, it would likely delay the entry into service of the two airplanes.

Although the seat manufacturer and the airframe manufacturer are most directly responsible for the design and certification of the seats, it is the operator that would suffer the immediate consequences if the seats could not be used. In this case, the petitioner is making its first of model flights, and cannot simply use a previous design or delay making a change to their fleet until the issue is resolved. There are no previous designs to revert to that have the unique trim design as specified by the operator. Thus, lack of seats effectively delays the airline's entry into service until seats are available. As noted in the petition, this would have an adverse impact on the public, in terms of both convenience and economics, for those passengers traveling between France and Reunion Island.

The combination of the effect on the public, owing to petitioner's entry into service, the potential for some uncertainty as to the applicability of the special conditions, and the limited number of airplanes affected, warrants consideration of an exemption. However, the FAA notes that this is a very specific set of circumstances, each of which contributes to the petitioner's justification and the public interest. While any applicant is free to petition for exemption, compliance with these special conditions is important and the FAA does not envision a similar set of circumstances arising in the future.

The FAA's decision

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, ILFC is hereby granted an exemption from Special Conditions No. 25-367-SC. The petition is granted to allow certification of two Boeing Model 777 series airplanes (serial numbers 35782 and 35783), with SICMA business-class seats with handrails that do not meet the heat-release and smoke-emissions requirements of Special Conditions No. 25-367-SC.

Issued in Renton Washington, on June 4, 2009

/s/

Stephen P. Boyd
Acting Manager, Transport Airplane Directorate
Aircraft Certification Service