

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

In the matter of the petition of

CESSNA AIRCRAFT COMPANY

Regulatory Docket No. 27501

for an exemption from § 25.562 of
the Federal Aviation Regulations

DENIAL OF EXEMPTION

By letter of October 18, 1993, Mr. Rex D. Hamilton, Executive Engineer, Cessna Aircraft Company, One Cessna Boulevard, P.O. Box 7704, Wichita, Kansas, 67277-7704, petitioned for exemption from the dynamic seat testing requirements of 14 CFR 25.562, which was promulgated by Amendment 25-64, of the Federal Aviation Regulations (FAR), for the cockpit forward observer seat on the Cessna Model 750 Citation X (ten) airplane.

Section of the FAR affected:

Section 25.562, which was promulgated by Amendment 25-64, requires that each seat and restraint system in the airplane that is approved for crew or passenger occupancy during takeoff or landing must be designed as prescribed in this section to protect each occupant during an emergency landing condition when: (1) proper use is made of seats, safety belts, and shoulder harnesses provided for in the design; and (2) the occupant is exposed to loads resulting from the conditions prescribed in this section. The regulatory standards include a specification to successfully demonstrate, by dynamic tests, the capability of the seat and restraint system to protect the occupant during the dynamic tests conducted in accordance with this section. The standards include performance measures that must not be exceeded.

The petitioner's supportive information is as follows:

"Cessna Aircraft has offered a forward observer's seat on the Model 650 Citation III, IV, & VII models in the form of a jumpseat that tracks out of the LH forward closet. These seats are installed in aircraft for customers desiring to operate under the provisions of 14CFR 135, Air Taxi Operators and Commercial

Operators. Such a seat has been accepted previously for satisfying the requirements of FAR 135.75(b) for use by the Administrator while conducting en route inspections.

"Cessna plans to offer a forward observer's seat on the Model 750 Citation X, whose cockpit is dimensional nearly identical to that of the Model 650, that will be located in the center aisle, just aft of the two crew seats. This seat may track out of a closet or it may be a portable seat which mounts to the floor structure.

"It is desired to obtain exemptive relief from the dynamic test standards set forth in 25.562 as incorporated by Amendment 25-64 effective June 16, 1988. Such a request is predicated upon the following rationale.

"1. The forward observer's seat is intended to be used as a temporary seat location only, and is exclusively for use during en route inspections. It is anticipated use of the seat will be limited.

"2. The complexity of design for a portable seat that would remain portable while meeting the newer dynamic criteria, if technically achievable, is anticipated to be economically impractical.

"3. The forward observer's seat and restraint system will meet all static strength requirements for passenger seats as required by 14CFR 25.561 and 25.785, as well as the flammability requirements of 25.853. Restriction from use by passengers will be by the use of a placard stating, "This seat for FAA en route inspections only.

"4. All other passenger seats in the cabin of the Model 750 will be designed to meet the dynamic criteria stated in 25.562 as well as all other applicable requirements of 14CFR25 as amended by 25-1 through 25-74.

"The proposed location of the forward observer's seat for the Model 750 provides a clear unobstructed view of the cockpit and will offer safety and added comfort to the FAA inspector. In many instances, the observer's seat is an existing passenger seat which might be aft-facing or in a position which affords a poor view of the cockpit. In the case of an aft-facing seat, the inspector must lean out of the seat and look behind into the cockpit. Such an arrangement may be uncomfortable as well as unsafe due to the fact that seats are not tested with occupants in this attitude.

"The provisions of 14CFR 11.25(b)(5) state that the petitioner state "the reasons why the granting of the request would be in the public interest" and "the reason why the exemption would not adversely affect safety". Although included in the text of the preceding comments, we would summarize these factors as follows:

"Public Interest:

"Use of the seat is temporary only, being used for en route inspections exclusively by the Administrator.

"Exemption from the dynamic test requirement for this forward observer's seat will assist in reduction of significant cost to those operators desiring approval under the provisions of 14CFR 135.

"Reasons petition would not adversely affect safety:

"The forward observer's seat and restraint system will meet all static strength requirements for passenger seats as prescribed by FAR 25.561 and 25.785 as well as all flammability requirements of FAR 25.853.

"Passengers would be excluded, by placard notation, of use of the observer's seat.

"Only cognizant FAA personnel will occupy the seat while conducting en route inspections.

"In summary, we believe this petition includes the criteria for the grant of an exemption as set forth in FAR 11.25(b)(5) and is consequently warranted. Granting of this exemption would be appreciated."

A summary of the petitioner's October 18, 1993, request for exemption was published in the Federal Register on November 30, 1993 (58 FR 63201). The public comment period ended December 20, 1993. There were no comments in response to the notice.

The Federal Aviation Administration's analysis/summary is as follows:

The petitioner is requesting exemption from the dynamic test requirements of § 25.562 for the forward observer's seat and restraint system for the Model 750 Citation X (ten) airplane. The seat is located in the center aisle just aft of the two crew seats and may track out of a closet or it may be a portable seat which mounts to the floor structure. This observer seat will be used exclusively by FAA personnel for en route inspections only. It should be understood that en route means all flight segments including takeoff and landing. The principal argument offered in support of the exemption is based on the belief that it would be economically impractical, if technically achievable, to design a portable seat to meet the new dynamic criteria. Implicit in the petitioner's supporting arguments is the presumption that, due to the exclusive and limited use of the observer's seat, the crashworthiness standards should be relaxed. The preamble to Amendment 25-64, in responding to a commenter, clearly states that crewmembers are

entitled to the same level of safety as the passengers. Although an FAA inspector is not considered a crewmember while performing en route inspections, he is entitled to the same level of protection as a crewmember.

The cost associated with dynamic testing of the observer's seat should be no greater than that associated with dynamic testing of any other seat in the airplane. The additional costs referred to by the petitioner are apparently in the form of increased developmental costs due to the alleged design complexity though no specific cost information is given. The added weight and maintenance costs associated with the current rule should not be significant factors where only one seat per airplane is involved.

The FAA has reviewed the arguments presented by the petitioner in support of the exemption and concludes that the data do not support his position. The arguments that it would be economically impractical and technically unachievable to design a portable seat to comply with the new design criteria are not supported by any factual evidence. Available test evidence from all sources indicates that it is technically achievable, and not economically unreasonable, to design all seats, including portable seats, to the new dynamic test requirements.

In consideration of the foregoing, I find that a grant of exemption is not in the public interest. Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), the petition of Cessna Aircraft Company to exempt the Cessna Model 750 X from compliance with § 25.562 of the Federal Aviation Regulations is denied.

Issued in Renton Washington, on

Transport Airplane Directorate
Aircraft Certification Service