

October 29, 1993

Mr. Timothy E. Hickcox, Manager  
Airworthiness, 777 Division  
The Boeing Company  
P.O. Box 3707, M/S 02-79  
Seattle, WA, 98124-2207

Dear Mr. Hickcox:

This is in response to your letter of October 18, 1993, in which you petition for an amendment to Exemption No. 5758, issued to the Boeing Company on October 1, 1993. This partial exemption from Section 25.1435(b)(1) of the Federal Aviation Regulations permits type certification of the Model 777-200 airplane by testing of the complete hydraulic system at 1.25 times the design operating pressure, or the system relief pressure, if lower, but not less than 3600 psig, in lieu of 1.5 times the design operating pressure.

In your petition you request that Exemption No. 5758 be amended to allow Boeing to conduct the test at 3400 psig in lieu of 3600 psig, since the system relief valve cracking pressure setting is 3400 psid.

You further state that the FAA's response to Boeing's original request for exemption contains some misunderstandings which may have led to what Boeing believes is a wrong conclusion (requiring Boeing to conduct the test at 3600 psig), and that this request to amend Exemption 5758 is to clear up those misunderstandings, which Boeing considers to be as follows:

a. Boeing never stated that conducting the test at 4500 psig is a non-value added test because it is inconvenient, but rather that nothing is learned at 4500 psig that cannot be learned at 3000 psig.

b. The 777 hydraulic system relief valves are conservatively designed to crack at 3400 psid, not at 3750 or 3600 psig, as stated by the FAA and the commenter to the petition.

c. The commenter's apparent intent is to allow testing at just below system relief cracking pressure, which would indicate testing at just less than 3400 psig.

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d. While Boeing still feels a 3000 psig test is appropriate, it understands that the FAA would like the test at a somewhat higher pressure, i.e. 3400 psig.

The FAA has determined that good cause exists for waiving the 120 day advance filing requirement and for not publishing a summary of this petition in the Federal Register, due to the fact that the granting of this request would not set a precedent and that the reasons presented are identical to those described in the original request.

The relief valve settings and associated technical information was not provided in the original request for exemption. Based on a review of the data available at the time, the FAA determined what it considered to be an appropriate level of compliance. However, in light of the information provided by Boeing in this request, the FAA has determined that an amendment to Exemption No. 5758 is both appropriate and justified.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not have an adverse effect on safety. Therefore, pursuant to the authority contained in Sections 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), Exemption No. 5758 is amended to allow Boeing to conduct the Model 777 hydraulic test at 3400 psig in lieu of 3600 psig.

All other provisions of Exemption No. 5758, together with its conditions and limitations if any, remain the same and are applicable to this exemption. This letter is part of, and shall be attached to, Exemption No. 5758.

Sincerely,

Ronald T. Wojnar  
Manager, Transport Airplane Directorate  
Aircraft Certification Service