

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
KANSAS CITY, MISSOURI 64106

In the matter of the petition of *
*
PILATUS AIRCRAFT LTD *
*
for an exemption from § 23.562(c)(5) *
of Title 14, Code of Federal Regulations *

Regulatory Docket No. 133CE

PARTIAL GRANT OF EXEMPTION

Pilatus Aircraft LTD has requested a temporary exemption from § 23.562(c)(5) to allow them to continue delivering aircraft while they solve the problem of meeting this requirement with a customer acceptable solution. This exemption is requested for the Model PC-12, an 8,000 pound single-engine turbine airplane. (The PC-12 earned a U.S. type certificate under Part 21, Section 29.) In addition to the exemption, Pilatus has requested that the FAA recognize the same extension to this exemption as granted by the Swiss Federal Office for Civil Aviation (FOCA). Pilatus is not alone; another manufacturer has been granted a temporary exemption and subsequent extensions to this requirement for the same reasons as Pilatus.

Pilatus Aircraft LTD was granted a temporary exemption from § 23.562(c)(5) by the Swiss FOCA. The original exemption granted at type certification was then extended until December 31, 1996, to complete all the technical work and until June 30, 1997, for any required retrofit program. This temporary exemption was granted, based, in part, on the material presented in Pilatus report CRI 001, Certification Review Item (see attachment).

The petitioner requests relief from the following regulations:

Section 23.562(c)(5) requires that each occupant must be protected from serious head injury under the conditions prescribed in paragraph (b) of this section. Where head contact with seats or other structure can occur, protection must be provided so that the head impact does not exceed a Head Impact Criterion (HIC) of 1000 units. The level of HIC is determined by using the equation in § 23.562(c)(5).

The petitioner supports the request with the following information:

The petitioner's supportive information as well as the Swiss FOCA's position is detailed in Pilatus report CRI 001, Certification Review Item. The eight page report is included with this temporary exemption as attachment 1.

The FAA's analysis/summary is as follows:

The FAA agrees with the FOCA position. This determination results from a coordinated evaluation of Pilatus's work. The FAA National Resource Specialist (NRS) for crash dynamics reviewed this case and, in addition to supporting this grant of exemption, cited another temporary exemption already granted by the FAA for a Part 25 commuter airplane. The following summary from the Swiss partial exemption covers the material that the FAA is willing to accept:

“A series of full scale dynamic and component tests, as well as a considerable amount of analytical and engineering work has been completed on this project to date. As yet, no complete end solution has been found. The compliance substantiation is not a short term task (as has been confirmed by other aircraft projects).

“The risk associated with the open items on the crew and the executive passenger seat (head contact with the toilet bulkhead, the executive passenger seat backrest, armrest and headrest together with the pilot's hand wheel) have been judged acceptable and, therefore, the exemption will be granted as follows:

“The FOCA grants the extension of the temporary exemption from FAR 23.562(c)(5) until 31st December 1996 to complete all the technical work and until 30th June 1997 for the required retrofit programme.

“An acceptable implementation plan for the retrofit campaign must be presented by Pilatus by 31st March 1997.

“Regular progress reports providing information on the status of the development work and the course of future activities must be provided to the FOCA.”

The Swiss FOCA's granting of the partial exemption and subsequent extension was based on a lack of a commercially desirable solution to the HIC certification requirement. The FAA also recognizes that certain technical solutions are not desirable to the manufacturer's customers and that this partial exemption is appropriate to allow sufficient development time without unduly delaying implementation of this new safety requirement benefiting passengers seated behind bulkhead structures.

Since it is the FAA's intention to foster timely implementation of the HIC requirement, exemptions will not be considered unless the FAA is assured that meaningful research is being accomplished on behalf of the petitioner and is being conducted in an expeditious manner. The FAA considers that Pilatus Aircraft is making a good-faith effort to observe the terms of that exemption, by engaging in development efforts and by documenting this activity in quarterly status reports. Accordingly, an extension would not adversely affect the level of safety permitted by the exemption, and would allow completion of the research required to achieve the commercially desirable solutions for front-row seat passenger protection.

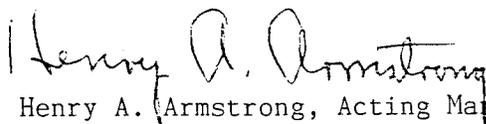
In partially granting this petition, the FAA recognizes the conflict caused by the omission of the Swiss exemption on the original U.S. TC and how this is manifested in airworthiness approval of the Pilatus PC-12 in the U.S. It was not the FAA's intent to hold up delivery to U.S. customers until Pilatus could pass this requirement. This does not mean that the FAA is downplaying the importance of the HIC requirement. It is our intent to have the airplane upgraded quickly after the original TC with the HIC requirements. At this time, however, delaying this exemption would not be in the interest of safety, based on item #2 below. For this reason, the partial exemption extension will be granted immediately with the standard comment period waived.

The FAA justifies that action on this petition should not be delayed by the standard publication and comment procedures as follows:

1. A grant of exemption would not set a precedent; it is a time limited extension from meeting a requirement and not permanent relief from the requirement.
2. The airplane is certificated to a recent Part 23 amendment and offers a higher safety level to the flying public. This includes being one of few airplanes to incorporate seats that meet current crash dynamic requirements; which, according to the FAA, significantly increases the level of safety offered to the occupants in a "standard" crash. The level of safety, therefore, is increased as the U.S. fleet of PC-12 aircraft grows.
3. A delay in acting on the petition causes an unnecessary barrier to the individuals who are waiting for delivery of their airplane.
4. A delay also creates an economic burden on the manufacturer.

In consideration of the foregoing, I find that a partial grant of exemption is in the public interest, and will not significantly affect the overall level of safety provided by the regulations. 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 Pilatus Aircraft Limited for a partial exemption, including the extension for seats on Pilatus PC-12 airplanes, is granted until December 31, 1996, to complete all the technical work and until June 30, 1997, for the required retrofit program.

Issued in Kansas City, Missouri, on April 23, 1996.


Henry A. Armstrong, Acting Manager
Small Airplane Directorate
Aircraft Certification Service