

160401

James G. Draxler  
Director  
Airplane Certification  
Commercial Airplanes Group

The Boeing Company  
P.O. Box 3707 MC 67-UM  
Seattle, WA 98124-2207

March 14, 2002  
B-H300-02-JGD-019



Docket Management System  
Docket No, FAA-2001-11032  
Department of Transportation  
Room Plaza 401  
400 Seventh Street, SW  
Washington, DC 20590-0001

Subject: Comments to FAA Final Rule, Request for Comments, "Security Considerations in the Design of the Flightdeck on Transport Category Airplane", Docket No. FAA-2001-11032 - 29

021813 12:19  
DEPT OF TRANSPORTATION

Dear Sir:

Enclosed are comments from Boeing Commercial Airplanes concerning the subject final rule. We hope these comments are considered in the interest of providing clarification to current and future type design applicants in providing flightdeck security for future transport category airplane designs.

Please direct any comments or questions to Ms. Jill DeMarco of this office at (425) 965-2015.

Sincerely,

Jim Draxler  
Director, Airplane Certification,  
Regulatory Requirements & Compliance

enclosure

cc: Aerospace Industries Association  
Attention: Skip Jones, Director,  
Engineering and Certification  
1250 Eye Street, NW., Suite 1200  
Washington, DC 20005-3924

Mr. Jeff Gardlin  
Airframe and Cabin Safety Branch, ANM-115  
FAA, Transport Airplane Directorate  
1601 Lind Avenue SW.  
Renton, WA 98055-4056

**Boeing Comments on  
“Security Considerations on the Design of the Flightdeck  
on Transport Category Airplanes”  
Docket No. FAA-2001-11032**

**Summary of Comments**



1. Boeing is concerned with the use of the phrase, “... *should the flightcrew become incapacitated,*” which appears in both the preamble to the rule and the rule text itself. The term “incapacitated” can be misinterpreted. It has traditionally been associated with a physiological condition, such as heart attack, stroke, fainting, choking on food, etc.; however, in the context of this rule it should be made clear that it can mean any reason for which the flightcrew is unable to grant access to the pilot compartment.
2. The rule (and preamble) addresses situations where the flight attendant must gain access to the pilot compartment. However, there are potential situations where one or more of the flightcrew could be outside the compartment while another flightcrew member is incapacitated within and unable to grant access to it. It is important to consider that the flightcrew always needs to be able to access the pilot compartment, no matter how they got out of it and regardless of the condition of the remaining pilot within.

**Use of the Term “Incapacitated”**

In the preamble to the rule, under the section titled “Inflight Access by Cabin Crew,” there is a sentence that states:

*“Therefore, § 25.772 is being amended to require that there be a means to allow the flight attendants to enter the flight deck should the flightcrew become incapacitated.”*

The requirements of §§ 25.772(c) and 121.313(j)(2) of the new rule contain similar statements.

In all of these sections, we are concerned with the use of the term “incapacitated.”

We are aware of the FAA’s intent in § 25.772(c), in that “the means” is to have future designs of transport category airplane flightdecks include an “Electronic Access System” (EAS) to allow entry into the flightdeck. However, the reason cited in the rule for having such a means (that is, “...*should the flightcrew become incapacitated*”) could be misinterpreted due to the use of the word “incapacitated.”

Traditionally, "incapacitation" assumes a physiological condition, such as a heart attack, stroke, fainting, choking on food, etc. However, there is no way to predict all of the possible scenarios that might result in the inability of person inside the pilot compartment to allow access to someone on the outside of the compartment. In the context of this rule, it is not important to know or describe why the flightcrew cannot perform their duties; it is only important to address the fact that they are unable to grant access to the pilot compartment from within.

Therefore, we suggest that this be clarified by changing the text in each case to read as follows:



*... should the flightcrew become unable to grant them access from within.*

With this change, the FAA's original intent is satisfied, while preserving the current philosophy on "Incapacitated flightcrew." Further, while the suggested rephrasing does not address every possible situation, it presents more of a performance-based requirement that could be applied to a large number of possible events (not merely the flightcrew being physiologically incapacitated).

#### Persons Outside of the Pilot Compartment

Sections 25.772(c) and 121.313(j)(2) of the rule should be revised to clarify and to address the specific affected persons:

- outside of the pilot compartment who should be able to attain access to it, and
- ~~Inside~~ the pilot compartment who are unable to grant access to the compartment.

First, the rule text addresses only the need for a means to allow flight attendants to gain access. However, there are potentially hundreds of situations that could result in one or more of the pilots also being outside the pilot compartment and, along with the flight attendants, unable to gain access. The most important thing to consider is that the flightcrew always needs to be able to access the pilot compartment, no matter how they got out of it and regardless of the condition of the pilot remaining within (if there is one).

Second, § 25.772(c) addresses the situation where "the flightcrew" (assuming to mean all members of the flightcrew) are incapacitated. However, § 121.313(j)(2) addresses the situation where only "a flightcrew member" (one person) is incapacitated. While this may likely be only an editorial inconsistency, it points to the fact that there may be situations where only one of the flightcrew members is in the pilot compartment and is incapacitated.

Considering the countless situations that could potentially occur on board the airplane, this rule should be geared to providing access by both the flight attendants and the flightcrew, in the event that either the person or persons left inside the pilot compartment cannot open the door, or do not want to open it, or have any other reason for not opening it.

We, therefore, recommend the following changes:

**§ 25.772(c)** *There must be an emergency means to enable a flight attendant or flightcrew member to enter the pilot compartment in the event that the flightcrew member(s) in the compartment becomes unable to grant them access from within.*

**§ 121.313(j)(2)** *Each operator must establish methods to enable a flight attendant or flightcrew member to enter the pilot compartment in the event that the flightcrew member(s) in the compartment becomes unable to grant them access from within. ...*



While this rulemaking activity is clearly a result of the tragic events of September 11, we believe the FAA should be considering the application of the rule towards not just terrorist acts, but other emergency situations as well. This is even recognized in the preamble of the rule where it states:

*"While not explicitly a requirement, the FAA has long recognized a need to provide for in-flight flightdeck entry by the cabin crew should a flightcrew member become incapacitated; because the consequences of not providing such access could be catastrophic."*

One final item for consideration is that the current wording of the rule does not make clear what the flight attendants are to do once they do gain access to the pilot compartment (and, for example, the entire flightcrew is incapacitated).