

**Disposition of Public Comments
AC 25.795-1X
Flightdeck Intrusion Resistance**

Comment	Requested Change	Disposition
Boeing and Transport Canada		
<p>Paragraph 1. Remove reference to use of simple tools as an aspect of intrusion resistance. [Also indicated in paragraph 8.a.(3).]</p>	<p>Boeing suggests removing the following sentence in Paragraph 1:</p> <p><i>“Intrusion resistance also includes the ability to resist attempts to enter the flightdeck through use of simple tools, such as pocket knives, nail files, or keys.”</i></p> <p>Transport Canada, on the other hand, recommends that the AC be clear that attempted entry using tools to pry the door open must be considered.</p>	<p>The language in paragraph 8.a.(3) has been in the AC since its original issue and is regarded as an important element of intrusion resistance without which impact resistance is moot. There is a new mention in paragraph 1 of this AC, and it is mentioned again in the preamble of the final rule. Thus we have not changed the language in the proposed revision to the AC.</p>
Boeing		
<p>Paragraph 4.d. Modify the definition of “Flightdeck Boundary.”</p>	<p>Modify the definition of “Flightdeck Boundary,” to include features, such as galleys and lavatories, that make up the forward-most portion of the passenger compartment. Make other wording changes to account for space between those features and the bulkhead itself.</p>	<p>We have revised the definition of “Flightdeck Boundary” to include interior features, such as galleys and lavatories. Space between these interior features and the bulkhead may, in fact, provide some increase in resistance to intrusion. Discussion of this space in terms of resistance to intrusion does not belong in the definition of “Flightdeck Boundary” but we refer to it in Paragraph 5.b.(2).</p>

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<p>Clarify the meaning of “accessible.”</p>	<p>All three commenters request a more descriptive definition of an “accessible” barrier.</p> <p>Boeing proposes a discussion of what constitutes “accessibility” to areas normally occupied by passengers. One specific suggestion was that placards be used to limit accessibility.</p> <p>ICCAIA would like clarification of the height above which a ceiling is considered inaccessible.</p>	<p>The issue of an “accessible” boundary is discussed at some length in the preamble to the final rule. Paragraph 4.b. in the AC includes some of that discussion to avoid confusion.</p> <p>Boeing’s proposal would not provide adequate security since any areas that simply have a placard limiting access would be considered not accessible under its proposal.</p> <p>Regarding a fixed ceiling height, the overall interior would dictate the effectiveness of the height. That is, if there is something to stand on, the height would have to be taken from that, rather than from the floor. However, it should be possible to address each installation as it arises, if there is any question.</p>
Boeing		
<p>Paragraph 5.c.(1) and (2). The AC should discuss only tests on flightdeck doors since tests on the bulkhead and other boundary elements should generally not be</p>	<p>Delete reference to boundaries, and refer only to the flightdeck door.</p>	<p>The AC discusses the low likelihood that tests on the bulkhead will be needed. However, if tests were needed, the tests described in the AC would apply to the</p>

* International Coordinating Council of Aerospace Industries Associations

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necessary.		bulkhead. Therefore, it would not be appropriate to delete reference to the bulkhead and other boundary elements.
Paragraph 5.c. Make suggested editorial changes for clarity.	Rewrite several sentences throughout this paragraph to clarify what is required for boundary details and tighten up the language referring to “boundaries” versus the “boundary.”	We have generally accepted the suggestions, although the requested rewrite would have removed reference to anything other than the flightdeck door in some locations, whereas the rule applies to the entire boundary. The AC makes it clear that tests will likely only be required on the door.
ICCAIA		
Paragraph 5.c(3). This information would be better in paragraph 5.b.	Paragraph 5.c.(3) isn’t really a testing detail and fits more closely in the discussion of “vulnerability” in paragraph 5.b.	We agree and have moved that section to paragraph 5.b., as new 5.b.(3).
Boeing		
Paragraph 6. GENERAL TESTING CONSIDERATIONS: Below Table 1, remove the last sentence of the second note because it wasn’t discussed in the NPRM or in the proposed revision to the original AC.	Delete the following sentence: <i>“While it is less likely to be an issue, other boundaries should also be assessed for their susceptibility to pulling and their ability to resist pulling should be substantiated, as necessary”</i>	The NPRM clearly includes the proposed requirement to apply the pulling force to the bulkhead as well. While it is not discussed in depth, the general intent to apply the same criteria currently in force for the flightdeck door to the rest of the boundary is stated in the preamble. Therefore, we have not changed the

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		proposed revisions to the AC.
ICCAIA		
Paragraph 5, Table 1. Add “handholds.”	Change Table 1 to refer to “handholds, such as ...XX” to be consistent with the rule language.	The table is specific to door testing, so the current wording is acceptable. However, we have added a reference to “handholds” in the second footnote after the table to be consistent with the rule.
Boeing and ICCAIA		
Paragraph 7. Include reference to “door” for the pendulum and test fixtures.	Boeing and, to a lesser extent, ICCAIA, believe that to be consistent with the rest of the AC, this section should refer to the <u>door</u> assembly. Previous discussion states that—if there is a reason to test the other elements of the flight deck boundary—then these test methods would be applicable. There is no need to add anything more here. The last sentence does not add to the guidance and may be overly restrictive, since boundary tests may utilize the same fixture, a modified fixture, or even a new fixture.	Because the test fixtures should apply to all elements which require testing, Figure 5 and the discussion should not imply that they are specific to the door. In fact, this change could be confusing. The current wording is more inclusive and in no way implies that a new fixture is needed to test other boundary elements.

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<p>Paragraph 7.d.(5) There is not enough detail on boundary tests.</p>	<p>This paragraph states that “Detailed features of the boundary, the failure of which would compromise either the intrusion or ballistic resistance of the flightdeck, should be addressed as with the detailed features of the door.”</p> <p>This language implies that it is necessary to perform an analysis of the structural details of the boundary in order to identify the existence of any features that could compromise intrusion resistance. The commenters raise the following questions about boundary tests:</p> <ul style="list-style-type: none"> ▪ If there are such features, what tests shall be performed? With the exception of the Impact Test, the other tests for door features do not seem applicable. ▪ Is the applicant responsible for test definition? We feel this will not be conducive to standardization of methods of compliance. ▪ In the case of submitting the boundary to a test similar to the Door Impact Test, what are the criteria to locate the impact 	<p>Since few tests on boundaries are expected, there was not much detail in the AC about how to perform such tests. However, based on the comments, additional discussion has been added to equate the tests that would be needed with the tests on the flightdeck door.</p> <p>In actual practice, an applicant would have to propose a test set up and the critical locations for testing. Even in the case of flightdeck doors, the actual designs incorporated features that required tests which were not discussed in AC 25.795-1. The remainder of the boundary is no different.</p>

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	<p>point?</p> <ul style="list-style-type: none"> ▪ The AC does not give any consideration to the fact that normally there are galley, lavatories or other monuments installed just behind the flightdeck bulkhead. What about the accessible/inaccessible determination mentioned before? If it is found that they need testing, the monuments play a role in increasing the mechanical resistance of the bulkhead to some degree and shall be part of any test to evaluate resistance to intrusion. 	
ICCAIA		
<p>Paragraph 8.b. The paragraph does not flow with the lead-in sentence.</p>	<p>ICCAIA points out that the paragraph uses the first sentence as a lead-in to each of the sub-paragraphs but this doesn't work for paragraph b.</p>	<p>We agree and have revised paragraph 8.b. accordingly. We have also revised the structure of the paragraph for consistency.</p>