

**Disposition of Public Comments  
AC 25.795-8X  
Interior Design to Facilitate Searches**

Comment	Requested Change	Disposition
<b>Quantas and ATA</b>		
<p>General: It is important to design airplanes so that they are easier to search.</p>	<p>Suggest that such regulatory change should include a requirement for manufacturers to consider regulatory compliance as a factor in the design process.</p>	<p>We agree with the general comment. The appendix to the AC addresses this general sentiment by providing additional guidance for best practices outside the regulatory requirements. By issuing the rule and associated ACs, we ensure that airframe manufacturers will factor the ease of search into their designs. As these designs become more standard, we expect that they will be included even in airplanes not required to comply with § 25.795(c)(3).</p>
<b>Several Commenters</b>		
<p>The title of the AC does not match the title of the relevant section of the rule</p>	<p>Change the title of the AC.</p>	<p>We agree and have changed the title of the AC, as suggested.</p>
<b>Boeing, Bombardier, and ICCAIA</b>		
<p>The applicability section of the AC states that it pertains to “<i>the flight deck, the passenger compartment, and to any remote compartments for use by...</i>” However, additional design guidance is provided throughout the AC (including Appendix I) for other areas, such as galleys, lavatories, and interior panels.</p>	<p>The commenters suggest deleting all guidance material and references to areas other than those specified in the rule, i.e., areas above stowage bins, toilets, and life preserver storage areas.</p>	<p>We have revised the applicability section to indicate those parts that provide regulatory guidance and those that provide supplemental information, considering best practices. Those in the second category are discussed in Appendix I.</p>

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<b>ICCAIA</b>		
There is no reference to Appendix I in the body of the AC	Suggests that the AC include a reference to the Appendix, probably in paragraph 6.	We agree and have revised the AC so that it refers to Appendix I in several places.
<b>Boeing</b>		
No definition of “ <i>dangerous objects</i> ” is provided, and the language is inconsistent with the rule language which refers to “ <i>weapons, explosives and other objects.</i> ” The language in the rule and in the AC should be consistent.	Request that reference to “dangerous objects” be deleted and replaced with a term used in the rule, such as “weapons.”	In this case, the term is used in its plain meaning and, given other changes to the AC, is an appropriate description. Therefore, we have not changed the AC.
<b>Boeing, Bombardier, and Transport Canada</b>		
The term “tamper evident” is vague without a definition of an “object.”	The commenters request a better definition of “tamper evident,” given the lack of a definition of “object ‘upon which to base an assessment.	We have addressed this comment in paragraph 5. by defining an object size to establish searchability.
<b>Boeing</b>		
Since mirrors and probing sticks are widely available, they should not be considered specialty tools and should be allowed to be used.	Mirrors and probing sticks should be permitted when determining compliance with the requirement for ease of search.	See the discussion below.

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<p><b>Paragraph 5.c.</b> The definition of “simple search” encompasses more than the associated rule requirement, which could lead to application of the rule to areas not directly specified in §25.795(c). With deletion of the other areas covered in the AC, this definition must be revised for consistency. [Additionally, mirrors and probing sticks are widely available; they should not be considered a specialty tool and should be allowed to be used.]</p>	<p>Suggest revision to this definition, as follows:</p> <p><i>“5.c. <u>Simple Inspection or Search:</u> A visual search in which no specialty tools or equipment are needed, <del>and there are no sub-compartments. (That is, any inconspicuous areas can be viewed without having to open more than one compartment.)</del> All passenger carry-on items are assumed to have been removed from the airplane when this inspection is performed.”</i></p>	<p>We agree that the reference to sub-compartments is no longer relevant, considering the scope of the rule. This discussion will be moved to Appendix I.</p> <p>The use of tools to conduct the search, however, is more of a procedural issue; while it could enhance the ability to search, the intent of this rule and the AC is to address the design directly without reliance on any particular technique or tool. Therefore, we have not changed this part of the AC.</p>
<b>ICCAIA and Bombardier</b>		
<p>The AC should define the terms “specialty tool” and “specialty fastener” and their uses.</p>	<p>The commenters would like more examples. They ask whether an Allen or “star” fastener is a “specialty fastener.”</p>	<p>There is a definition of “specialty tool” and “specialty fastener” in the AC. Based on the definitions, neither of the examples in question would qualify as specialty fasteners.</p>
<b>ICCAIA, Bombardier, Airbus, and Boeing</b>		
<p>The AC should define the effort needed for a search of the overhead bin. For example, what is the size of the object for which one is searching? Does one search while standing on a seat?</p>	<p>The commenters request that an “object” be somehow defined to enable a designer to know when the design satisfies the requirement. They also would like a more complete description of the effort required</p>	<p>This comment was referred to the ARAC Harmonization Working Group (HWG) because it was not resolved during the group’s original tasking although it was discussed at length.</p>

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	to perform a search.	<p>After further lengthy discussions, the HWG arrived at a standardized approach that utilizes a constant volume with various geometries to determine whether a design is easy to search. This approach is incorporated in the AC.</p> <p>In terms of the effort required, both the rule and the AC refer to a simple inspection or search. The purpose of the requirement is to prevent dangerous objects from being hidden on the airplane. This can be done by either removing places on the airplane where objects can be hidden or by providing features that make it easy to find objects that are hidden.</p> <p>Clearly, another approach would be to describe a more intensive and sophisticated search procedure, but that approach is not consistent with the requirement of the rule. Generally, a person should be able to perform the search while standing on the cabin floor. The rule provides a benefit regardless of the search procedure used and does not depend on a particular procedure to be effective.</p>

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<b>Quantas</b>		
A specialty tool to “replace” a panel, as opposed to “remove” a panel, is an acceptable solution.	No specific suggestion.	We agree that either approach is valid. The AC doesn’t specify how a specialty tool or specialty fastener is used, so this matter is effectively already covered.
<b>Boeing</b>		
<p><b>Paragraph 6.a.</b> Modify the discussion of intent to include the use of simple tools to aid in search and remove other suggested approaches.</p>	<p>Suggests the following changes:</p> <p><i>“6.a. <u>Intent</u>. ... Examples are areas <del>under seat or</del> above stowage compartments and....Depending on the location and type of objects under consideration, one may use any of the following approaches to the interior design of the airplanes:</i></p> <ul style="list-style-type: none"> <li>• <i><del>Design compartments to be opened with a single...</del></i></li> <li>• <i><del>Limit or eliminate void spaces..</del></i></li> <li>• <i><u>Design closeout panels</u></i></li> <li>• <i><u>Design such that use of simple tools to aid in search will facilitate intent of rule</u></i></li> </ul> <p><i>Secure access to compartments with <del>specialist fasteners or tamper evident....”</del></i></p>	<p>The current wording is valid since the area under the seat is frequently used for life preservers; elimination of void spaces applies to the area over the bin as does closeout panels. The use of tools was never part of the rule since that is outside the scope of the design. The AC will be revised to include reference to closeout panels.</p>

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<p><b>Paragraph 6.b.</b>, Change the discussion of lavatories to match the portions of the airplane covered by the rule.</p>	<p>Suggest deleting these three sentences:</p> <p><i>6.b. <u>Conflicting Needs</u>. ... Lavatories must have out-of-sight storage for extra supplies, but the supplies must be available when needed. Food service requires storage and preparation areas. The need to provide these facilities or equipment storage can conflict with the objective of minimizing the space that could be used for hiding explosive or other incendiary devices.</i></p>	<p>These sentences are accurate and reflect current practice in terms of actual searches. In addition, these areas are discussed in Appendix I of the AC, so it makes sense to mention them. The AC is clear regarding what is required by the rule and what is simply supplemental information. As mentioned above, we have revised the AC so that it refers to Appendix I in order to make that connection.</p>
<p><b>Paragraph 7.</b> Currently, the guidance provided in this section of the AC for the specific paragraphs of the rule does not provide anything above and beyond the rule language itself. Additionally, our previous comments have noted the need to remove all aspects from the AC that are not directly related to the rule language. Once those aspects are removed, unless guidance above that provided by the rule language is given, there is very little need for the AC, other than the definitions of tamper-evident, simple search, and simple design.</p>	<p>Request examples of methods currently used and/or acceptable to the FAA to show compliance with the rule in this regard.</p>	<p>We agree and have added guidance to the discussion of the life preserver stowage area and the area above overhead bins. There is no additional information available for the lavatory/toilet bowl since there is no experience with alternative designs at this point.</p>

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<p><b>Paragraph 7.a.</b> We are unsure if the wording in the AC regarding “tamper evident” adequately reflects the FAA’s intent with regards to storage of life vests.</p>	<p>Request clarification on this matter. Since the life preservers or their storage locations should be designed so that tampering is evident—and considering the definition of “tamper evident” in Section 5 of the AC—does this mean that the life vest storage has to be “net fit” with the rest of the seat structure?</p>	<p>We have modified the AC to provide some examples of acceptable life preserver stowage that doesn’t involve a net fit design: a stowage compartment that is easily seen and may require a specialty tool or fastener to restore or tamper seals that will break any time the compartment is accessed.</p>
<b>ICCAIA</b>		
<p><b>Paragraph 7.a.</b> The AC merely restates the rule and does not provide any method of compliance.</p>	<p>Request examples of acceptable methods of compliance.</p>	<p>We agree. See comment above.</p>
<b>Boeing</b>		
<p><b>Paragraph 7.b.</b> Other than the size defined for the toilet tube diameter, the AC does not indicate a defined size of object to protect against. Inclusion of a defined size would enhance the use of this AC for the applicant and would ensure standard application of the intent.</p> <p>Restrictions and solutions meant to meet the intent of the rule, such as the use of specialty tools and viewing requirements for inconspicuous areas, appear too</p>	<p>Suggests revising the text as follows:</p> <p><i>“7.b. <u>Overhead Bins.</u> The areas above overhead bins <del>should</del> <u>may</u> be designed with closeout panels or screens to prevent any objects placed in these areas from being hidden from view in a simple search from the aisle. <del>Similarly, a design that would prevent closing of the bin, if an object were placed above it, would satisfy the requirement.</del> <u>As an alternative to closeout panels, a simple design that</u></i></p>	<p>The issue of object size has been addressed within the HWG as discussed above. As also discussed above, the use of tools to aid the search is beyond the scope of the rule and AC. We have revised the wording to offer closeout panels or screens as examples and to state the objective as preventing objects from being hidden on top of the bin.</p> <p>The proposed alternative focuses on the procedure rather than the design and does</p>

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<p>prescriptive. The AC dictates the design of panels, screens, or methods that reveal tampering, but it would be beneficial if it also provided examples of <u>known</u> means of compliance, including the current use of simple tools (mirror on a stick) that meet the intent of the rule with less burden on the applicant.</p> <p>Additionally, the majority of overhead bin upper surfaces on transport category airplanes are designed to (1) accommodate interior lighting placed outboard (near the sidewalls); (2) accommodate passenger movement underneath to access seating; and (3) create a signature “ambience” that will provide for passenger comfort and feeling of well-being during flight.</p> <p>These design criteria place the bins at such a height that the tops of the bins are not capable of being viewed without simple tools from the aisle. Given that the top of most stowage bins can be readily searched with a mirror, we suggest that the AC specify that there are current methods to meet the intent of the rule other than complete redesign.</p>	<p><i><u>allows the use of a tool from the aisle (such as a mirror or a probing stick) to find objects placed on top of the bins is an acceptable method of compliance.”</u></i></p>	<p>not address the main purpose of the rule: to reduce the risk of something being hidden through improvements in design.</p>

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<p><b>Paragraph 7.c.</b> would be improved with a positive statement regarding suitable designs, rather than stating what is not acceptable.</p>	<p>Recommend changing the paragraph to read as follows:</p> <p><i>Toilet bowls. Toilet bowls should not permit the passage of solid objects greater than 2 inches in diameter. Therefore, a vacuum waste system with an exhaust pipe 2 inches in diameter would be acceptable; a recirculation toilet with a bowl discharge opening greater than 2 inches in diameter would not be acceptable.</i></p>	<p>We generally agree, although any discharge with a diameter greater than 2” would not meet the requirement, regardless of the type of flush system type. We have revised the AC to address both situations.</p>