

DISPOSITION OF PUBLIC COMMENTS AC 25.869-1A, FIRE PROTECTION: SYSTEMS			
Commenter	Comment	Requested Change	Disposition
<p>Boeing and AIA/GAMA</p> <p>Comment no. 18379-41 (Boeing)</p> <p>Comment no. 18379-64 (AIA/GAMA)</p>	<p>Boeing and AIA/GAMA comment that paragraph 4a of this AC requires that <i>“electrical components in areas immediately outside firewalls and in engine pod attachment structures should be made of such materials and installed at such a distance from the firewall that they will not suffer damage that could hazard the airplane if the surface of the firewall adjacent to the fire is heated to 1100° C (2012° F) for 15 minutes.”</i></p> <p>Boeing and AIA/GAMA note that the 15-minute requirement is for fire proof parts and it contradicts the requirements of §§ 25.869(a)(2) and 25.1713(a)(2), which only require the parts to be fire resistant. They recommend that the FAA change 15 minutes to 5 minutes to align with the regulations.</p>	<p>Change paragraph 4a from- <i>“electrical components in areas immediately outside firewalls and in engine pod attachment structures should be made of such materials and installed at such a distance from the firewall that they will not suffer damage that could hazard the airplane if the surface of the firewall adjacent to the fire is heated to 1100° C (2012° F) for 15 minutes.”</i></p> <p>to the following proposed text:</p> <p><i>“electrical components in areas immediately outside firewalls and in engine pod attachment structures should be made of such materials and installed at such a distance from the firewall that they will not suffer damage that could hazard the airplane if the surface of the firewall adjacent to the fire is heated to 1100° C (2012° F) for 5 minutes.”</i></p>	<p>A conflict does not exist between paragraph 4a in AC 25.869-1A and §§ 25.869(a)(2) and 25.1713(a)(2) because the 15 minute fire proof requirement is for the firewall, not the electrical equipment. Paragraph 4a in the AC states that the electrical equipment installed adjacent to the firewall outside the fire zone should not cause any hazard if there is fire in the fire zone area and the firewall is performing per its design (exposed to fire of 2000 F for 15 minutes; to the side that is inside the fire zone). No change was made to this AC based on this comment.</p>

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<p>AIA/GAMA</p> <p>Comment No. 18379-64</p>	<p>Page 2, paragraph 4e. ICAs do not “ensure” that a function is retained throughout the expected service life. There is no maintenance program that can completely eliminate system failures that could defeat fire protection. The sentence should say simply “The Instructions for Continued Airworthiness must include all the maintenance tasks required by § 25.1739.”</p>	<p>Change paragraph 4e from the following existing text:</p> <p><i>“The Instructions for Continued Airworthiness (required by §§ 25.1529 and 25.1739) must include all maintenance actions necessary to ensure that electrical system components maintain their compliance with the requirements of § 25.869 throughout the expected service life of the airplane.”</i></p> <p>to the following proposed text:</p> <p>The Instructions for Continued Airworthiness (required by §§ 25.1529 and 25.1739) must include all the maintenance tasks required by § 25.1739.</p>	<p>We agree with the intent of the commenter’s suggestion. Our goal is that the electrical component be maintained in accordance with its original design limits and that it performs its intended functions throughout its expected service life.</p> <p>We have revised paragraph 4e as follows:</p> <p>The Instructions for Continued Airworthiness (required by §§ 25.1529 and 25.1729) must include all maintenance actions necessary to ensure that electrical system components maintain their compliance with the requirements of § 25.869. throughout the expected service life of the airplane.</p>
<p>AIA/GAMA</p> <p>Comment No. 18379-64</p>	<p>Paragraph 4f(3) “Rapid dilution” of leaking oxygen needs a definition of what an acceptable rate (or maximum oxygen level) should be. Also, there needs to be some clarification on the application of the dilution requirement for airplanes that have oxygen bottles installed in unpressurized compartments</p>	<p>Revise paragraph 4f(3) to include a definition for an acceptable rate for “rapid dilution of leaked oxygen.”</p> <p>Clarify application of this requirement for airplanes that have oxygen bottles installed in</p>	<p>We do not agree with the commenter’s suggestion to include a definition for an acceptable rate for rapid dilution of leaked oxygen. An applicant must comply with § 25.869(c), which states that “oxygen equipment and lines must be installed so that escaping oxygen</p>

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	while operating on the ground.	<p>unpressurized compartments while operating on the ground.</p> <p>Proposed revision to paragraph 4f (3):</p> <p><i>The compartments in which high pressure oxygen system components, including oxygen source(s), are located should have adequate ventilation to ensure the rapid dilution of leaked oxygen. Such compartments should also provide adequate protection against contamination by liquids and other products which could result in the risk of fire.</i></p>	<p>cannot cause ignition of grease, fluid, or vapor accumulations that are present in normal operation or as a result of failure or malfunction of any system.” The concentration of oxygen that will cause ignition depends on the type of grease, fluid, or vapor. Therefore, each applicant will need to determine for its unique situation how quickly and to what level the oxygen should be diluted.</p> <p>We agree with the commenter’s suggestion to clarify whether the dilution requirement applies during ground operation of airplanes with oxygen bottles installed in unpressurized compartments. We added paragraph 4f(7) to this AC, which states: “§ 25.869(c) is applicable to oxygen equipment and lines during all airplane operations.”</p>
AIA/GAMA Comment No. 18379-64	Page 3, paragraph 4f(4), requires the oxygen filling port to be as “remote as possible” from other service points. Literal interpretation would require the oxygen port to be located on the radome or tailcone. Section 25.869(c)(3) requires that leaking oxygen not cause		<p>We agree with the commenter’s suggestion to clarify where the oxygen filling ports should be located. The following change has been made to this AC.</p> <p>The text has been changed from:</p>

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	<p>ignition of grease, etc. from normal operation or failure, which does not necessarily require “remote as possible” mounting of the oxygen filler port. Better guidance would be something like “. . .located outside the aircraft and far enough from ignitable material like grease, fuel vapor, or hydraulic fluid, so that ignition is prevented.” The proposed regulation has no requirement governing the location of the filler port that would support this means of compliance. The requirement for placard and filling instructions is adequate.</p>		<p>“4f(4) <i>Where in-situ charging facilities are provided, the compartments in which they are located should be accessible from outside the aircraft and be as remote as possible from other service points and equipment. Placards should be provided, located adjacent to the servicing point, with adequate instructions covering precautions to be observed when the system is being charged.</i>”</p> <p>to -</p> <p>Where in-situ charging facilities are provided, the compartments in which they are located should be accessible from outside the aircraft and be located far enough from ignitable material like grease, fuel vapor, or hydraulic fluid, so that ignition is prevented. Placards should be provided, located adjacent to the servicing point, with adequate instructions covering precautions to be observed when the system is being charged.</p>