

	DISPOSITION OF PUBLIC COMMENTS AC 25.1353, ELECTRICAL EQUIPMENT AND INSTALLATIONS		
Commenter	Comment	Requested Change	Disposition
AIA/GAMA	<p>AC 25.1353-1 Electrical Equipment and Installations</p> <p>Page 2, Paragraph 4. The first paragraph says that the consequences of any electrical interference be shown to not prevent continued safe flight of the airplane.</p> <p>FAR 25.1353(a) limits this evaluation to interference likely to be present in the airplane. It is also not clear if the use of the term “continued safe flight of the airplane” is the same as that typically used in 25.1309, i.e., meaning not catastrophic. If so, the guidance appears to require something less than 25.1309 would require. The application of “1309-like” terms in this regulation needs to be defined or confirm that the meaning is the same as 1309. Note that this comment is directed at “continued safe flight” not at the use of the word “hazardous” which is adequately defined in the guidance.</p>	<p>“1309-like” terms in this regulation (“continued safe flight”) needs to be defined or confirm that the meaning is the same as 1309.</p> <p>“...In § 25.1353(a) the term means that the applicant must perform a qualitative design assessment of the installed electrical equipment and controls to determine that the consequences of any electrical interference will not result in effects that would prevent the continued safe flight of the airplane....”</p>	<p>The FAA revised the wording as follows:</p> <p>continued safe flight and landing of the airplane....”</p>

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AIA/GAMA	Page 2, Paragraph 4.a.(3). The guidance says that the interference assessment should consider malfunction of electrically-powered apparatus, but there is no limit on the malfunctions to be considered, e.g.,	<p>Clarify limits to the malfunctions that must be assessed -</p> <p>a. § 25.1353(a). The following sources of interference should be considered when demonstrating compliance to the requirements of § 25.1353(a):</p> <p>(1) Conducted and radiated interference caused by electrical noise generation from apparatus connected to the busbars.</p> <p>(2) Coupling between electrical cables or between cables and aerial feeders.</p> <p>(3) Malfunctioning of electrically-powered apparatus.</p> <p>(4) Parasitic currents and voltages in the electrical distribution and grounding</p>	All possible malfunctions need to be considered. The wording will remain as proposed.

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		<p>systems, including the effects of lightning currents or static discharge.</p> <p>(5) Different frequencies between generating or other systems</p>	
AIA/GAMA	<p>Page 3, Paragraph 4.e. The guidance acknowledges that adequate certification standards for lithium-ion batteries is not in the current or proposed Part 25, and that they have to be addressed by special condition. Because the AC is specifically for compliance with the proposed 25.1353, it would be better to publish this as a policy memo. If the special condition requirements change in the future, obsolete guidance in an advisory circular will cause confusion.</p>	<p>Because the AC is specifically for compliance with the proposed 25.1353, and 25.1353 does not apply to lithium-ion batteries, it would be better to publish this guidance as a policy memo.</p> <p>e. <u>Lithium-Ion Batteries.</u> Lithium-ion batteries have certain failure and operational characteristics and maintenance requirements that differ from that of nickel cadmium (Ni-Cd) and lead acid rechargeable batteries. The requirements of 25.1353(c) do not</p>	<p>The FAA agrees, in part. See the changes below:</p> <p>e. <u>Lithium-Ion Batteries.</u> Lithium-ion batteries have certain failure and operational characteristics and maintenance requirements that differ from that of nickel cadmium (Ni-Cd) and lead acid rechargeable batteries. The requirements of 25.1353(c) do not adequately address these characteristics. The following discussion provides some informational background and design and installation considerations for these unique characteristics. It should not be considered as guidance for complying with 25.1353(c),</p>

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		<p>adequately address these characteristics. The following discussion provides some background information and design and installation considerations for these unique characteristics. It should not be considered as guidance for complying with 25.1353(c), however, because that rule does not apply to lithium ion batteries and use of such batteries may require Special Conditions, per the requirements of § 21.16. The following information is provided to help the applicant develop the design and installation of the Li-ion battery and may help the applicant in complying with any Special Conditions that may be issued in lieu of 25.1353(c) for Li-ion battery installations.</p>	<p>however, because that rule does not apply to lithium ion</p>

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