

Field Document Review Comment Matrix

AC21-16G: RTCA Document No. DO-160 versions C, D, E, F, and G, “Environmental Conditions and Test Procedures for Airborne Equipment”						
#	Commenter	Page, Section, Paragraph	Comment	Rationale for Comment	Recommendation	Resolution
1	AIR-500	Global Change	Align the labeling of the subparagraphs directly under the title of the main paragraph.	Editorial		Editorial correction was made to reflect the recommended change.
2	AIR-500	Global Change, including Appendix 1	Incorrect spacing. There should be only two spaces between the labeling (number) of the paragraph and the title.	Editorial	Remove auto tab.	Editorial correction was made to reflect the recommended change.
3	AIR-500	Paragraph 1, page 1	Improper capitalization.	Editorial	Remove the capitalization from the terms “advisory circular” in the title. Then use “AC” thereafter.	Editorial correction was made to reflect the recommended change.
4	AIR-500	Paragraph 1a, last sentence, Page 1	Change wording.	Editorial	Rewrite to read: “ <u>The FAA strongly encourages</u> the use of RTCA/DO-160G for new articles”.	Editorial correction was made to reflect the recommended change.
5	AIR-500	Paragraph 5a, Page 2	Redundant information.	Editorial	Rewrite to read: “Title 14 of the Code of Federal Regulations (14 CFR) parts 21, 23, 25, 27, 29, 33, and 35”. The rest of the sentence (are relevant to this AC) is redundant.	Editorial correction was made to reflect the recommended change.
6	AIR-500	Paragraph 6a, Page 2 and paragraph 7h, Page 4	Improper capitalization.	Non-compliance to memo sent by AGC on 1/24/94.	Remove the capitalization from the terms “parts and subpart” in reference unless it begins a sentence.	Editorial correction was made to reflect the recommended change.
7	AIR-500	Paragraph 6b, 4 th sentence,	Define the acronym “HIRF”.	Editorial	Use the acronym “HIRF” after the first usage.	Defined in paragraph 5c.

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		Page 2				
8	AIR-500	Paragraph 6b, 4 th sentence, Page 2	Change wording.	Cannot use section symbols if you use the acronym 14 CFR in the reference.	Rewrite to read: ...expected to be subject to HIRF requirements in §§ 23.1308, 25.1317, 27.1317, or 29.1317, use RTCA/DO-160F or G.	Editorial correction was made to reflect the recommended change.
9	AIR-500	Paragraph 6d, last sentence, Page 3	Define the term “aircraft certification office” first.		Use the acronym “ACO” after the first usage.	Editorial correction was made to reflect the recommended change.
10	AIR-500	Paragraph 7f, 1 st sentence, Page 3	Change wording.	Cannot use section symbols if you use the acronym 14 CFR in the reference.	Rewrite to read: ...to meet HIRF requirements in §§ 23.1308, 25.1317, 27.1317, or 29.1317, use RTCA/DO-160F or G.	Editorial correction was made to reflect the recommended change.
11	AIR-500	Paragraph 7f, last sentence, Page 3	Missing comma.		Place a comma after the acronym “HIRF”.	Added the word “the” in front of HIRF.
12	AIR-500	Paragraph 7g, Page 4	Missing comma.		Place a comma after the terms “requirements” in the 1 st sentence and “lightning” in the 2 nd sentence.	Editorial correction was made to reflect the recommended change.
13	AIR-500	Paragraph 7h, 2 nd sentence, Page 4	Remove improper capitalization and incomplete sentence.		Rewrite to read: <u>For</u> fire and flammability guidance for 14 CFR part 33...	Editorial correction was made to reflect the recommended change.
14	AIR-500	Paragraph 8c, 1 st sentence, Page 4	Change wording.	Note: AVSIMS isn’t live yet.	Rewrite to read: View a list of all ACs on the FAA’s website at www.faa.gov/regulations_policies/advisory_circulars/	Editorial correction was made to reflect the recommended change.

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					or from the Regulatory and Guidance Library at www.rgl.faa.gov .	
15	AIR-500	Signature Block, Page 4	Incorrect spacing.		There should be five spaces between the last paragraph and signature block.	Editorial correction was made to reflect the recommended change.
16	AIR-500	Signature Block, Page 4	Incorrect alignment.		Adjust the alignment of the word “Division” to appear directly under the title “Manager”.	Editorial correction was made to reflect the recommended change.
17	AIR-500	Appendix 1, Under Changes from DO-160F to DO-160G, Section, Box 4, Page A-4	Delete the abbreviation “CAT T”.		Replace the abbreviation “CAT ” with the term “Category” for consistency with 2 nd column.	Editorial correction was made to reflect the recommended change.
18	AIR-500	Appendix 1, Under Changes from DO-160E, Page A-7	Incorrect formatting.	Inconsistent with the rest of the document.	Move text up three lines to begin at the top of the section directly under the solid line that divides the sections.	Editorial correction was made to reflect the recommended change.
19	AIR-500	Appendix 1, Under Changes from DO-160F to DO-160G, Section, Box 1, Page A-12	Missing period.		Place a period after the term “categories”.	Editorial correction was made to reflect the recommended change.
20	ANE-171/ C. Alfano	Page 3/Para 7.C	Paragraph notes “When installing equipment previously qualified to	MIL-STD-810G is the latest revision of DOD Test Method Standard for	Use latest revision of MIL-STD-810G versus 810C.	Editorial correction was made to reflect the recommended change.

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			other environmental standards, such as Military Standard (MIL-STD) 810C, the equipment must comply with applicable airworthiness requirements” Is it our intent to use REV. C of 810? MIL-STD-810 is currently at Rev. G.	Environmental Engineering Considerations and Laboratory Tests.		
21	Khailaa Hosny ACE118-C	General	You might consider adding some clarification in regard to expanding DO-160 usage to systems testing as well, such as for lightning and EMI. For example. When a complete assembly of an engine or aircraft equipment is tested, and passed as a whole. It does not mean that each equipment as a stand alone is qualified unless measurements at the interfaces during testing were taken.	Although this document was originally intended for equipment qualifications of black boxes independent from installation on the aircraft, it has been expanded in the last revisions to also address complete aircraft or engine functional systems in the aircraft.		In earlier versions of this AC (AC21-16E and earlier), it stated that an applicant for a type certificate or supplemental type certificate may use RTCA/DO-160E (or earlier version) to show compliance with appropriate airworthiness requirements, as agreed to by the cognizant Aircraft Certification Office. This document was always intended for equipment qualifications and installations.
22	Khailaa Hosny ACE118-C	General	Consider having the applicant track any internal malfunctions indicated	Our current approach for certification is not based on characterization of		This AC is not changing the process utilized between the applicant and the FAA. When the

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			during testing, even if the malfunction was deemed acceptable to the system being certified.	equipment performance under the various environments. Instead it is based on passing a certain Pass/fail criteria. The criteria are usually negotiated with the FAA ACO prior to testing and may allow acceptance of noncritical faults that may become critical in another similar aircraft installation.		applicant is negotiating with the ACO, the ACO engineer can request the applicant to track any internal malfunctions indicated during testing, even if the malfunction was deemed acceptable to the system being certified.
23	Ervin Dvorak ACE-111	Page 3, Paragraph 7.a.	Revised the paragraph	It is stated: If you are an applicant installing equipment, you may use RTCA/DO-160, any version, to support compliance with the appropriate airworthiness requirements. However, there are exceptions in paragraphs 7.c, 7.f., and 7.g.	Revised as follows: If you are an applicant installing equipment, you may use RTCA/DO-160, any version, to support compliance with the appropriate airworthiness requirements except as identified below.	The sentence was revised to the following: If you are an applicant installing equipment, you may use RTCA/DO-160, any version, to support compliance with the appropriate airworthiness requirements except as identified in paragraphs 7c, 7f, 7g, and 7h.
24	AMN-111	General	This draft specifically refers to RTCA/DO-160G as the latest revision, with references to previous versions. The next time DO-160 is updated, this version of the AC will be	RTCA/DO-160 seems to undergo revision on a somewhat frequent basis. This draft AC addresses many of the past versions of DO-160 but does not account for any possibility	Recommend making the guidance more generic, to the extent possible, by referring to the current version, rather than specifically indentifying rev G as the current version. If	This AC is revised every time a new version of DO-160 is published. We do not make this AC generic because there are instances where the guidance in the MOPS is not acceptable to the FAA. Since DO-160 is several

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			obsolete.	of another version in the future.	possible, it would be helpful to take the information in Table 1 and maintain it in some form or location that can be easily updated without having to revise the AC every time DO-160 is revised. Since it simply identifies the differences between versions and does not provide specific guidance re: how to apply it, perhaps RTCA could manage that table, and the AC could just refer to it.	hundred pages, the table in appendix I provides a high level view of the major changes made in each section. This helps to reduce the time spent reading each version to figure out what has changed.
25	Dave Walen EMI/HIRF CSTA	page A-4, right column, second row	The word 'extinghushant' should be spelled 'extinguishant'.			Editorial correction was made to reflect the recommended change.