

Public Comment Form

AC21-16G: RTCA Document No. DO-160 versions C, D, E, F, and G, “Environmental Conditions and Test Procedures for Airborne Equipment”						
	Commenter (Name, Company, Phone Number, Email)	Page, Section, Paragraph	Comment	Rationale for Comment	Recommendation	Resolution
1.	Marc Ponçon Eurocopter. Eurocae WG14 chairman 00 33 4 42 85 72 52 marc.poncon@eurocopter.com	Page 1 Section1 §b.	1) It should be explicitly mentioned that User Guide in appendixes are to be considered each time DO 160G is recommended. 2) Also guidance may be updated by Changes while the main section remains unmodified for a significant period of time	1) Appendixes for guidance are key part of the document. They may include text formerly in main section and in any case they include very important information for the good application of the procedures. 2) Process for update of this guidance should be more flexible than for the main sections.	Add a note that says: “When reference to RTCA/DO160G is made in this AC, it includes User Guides when provided as appendixes for the section. These User Guide appendixes may be updated with Changes during the period of DO160G applicability and last issue of the appendix should be considered for each section.”	The AC 21-16G reference to DO-160 does not exclude the user guides. Section 1.2 expands on the intent and purpose of the user guides.
2.	Marc Ponçon Eurocopter. Eurocae WG14 chairman 00 33 4 42 85 72 52 marc.poncon@eurocopter.com	Page 3 Section 7 § b.	Is it correct (last sentence) to say that the installer can re-qualify the equipment.	DO 160 Qualification is not only testing a black box but should involve some design engineering activity that can only be managed by the equipment supplier. This goes along with the responsibility that is endorsed by the supplier when declaring the	Replace last sentence with the following: “If the EQF categories do not adequately address your installation, then you may request your supplier to re-qualify the equipment to meet the appropriate sections and category levels or you may run analysis and test to support the evidence that the equipment will	The intent of the sentence in 7(b) is to highlight that the appropriate DO-160 testing is based entirely on the requirements of the installation. If the original environmental testing is not adequate, section 7 (b) highlights that additional testing may be required.

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				compliance to a given section and category. Installer may run some test and/or analysis for integration but most likely with a different approach than DO160 qualification.	behave correctly when installed on your aircraft.”	
3.	Marc Ponçon Eurocopter. Eurocae WG14 chairman 00 33 4 42 85 72 52 marc.poncon@eurocopter.com	Page 4 Section 7 § d	This paragraph clearly identify that for a design change, if no regression can be shown from the point of view of DO160 qualification, no further testing is required. This is in line with § 2.9 of DO160 G. But what is not clear is what the issue to be used for re-testing when similarity cannot be demonstrated is?	In most cases the contractual situation is that re-qualification is performed according to the initially specified conditions. This may be in some case quite old DO160 issue, known today as being insufficient. Once the design is sufficiently modified that the passed experience cannot be relied on, the logic would be to test to the newly recommended standard.	Add at the end of d. “If similarity or non regression cannot be evidence, the equipment should be tested to one of the last recommended DO 160 issue which is not necessarily the one used in the initial specification.”	When the similarity assessment described in section 7(d) is not appropriate, AC 21-16G guides the equipment manufacturer to qualify the equipment to the appropriate environmental qualification. AC 21-16G does not define the appropriate environmental qualification for each application and installation environment, thus no change has been made to section 7(d).

