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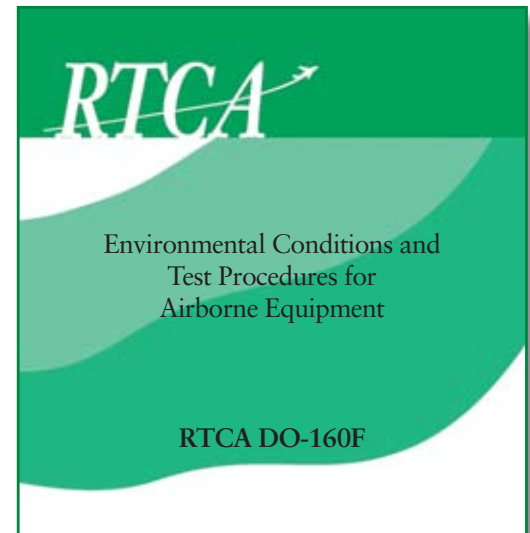
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Environmental Conditions and Test Procedures for Airborne Equipment

DO-160 Version "F" is Available

The latest edition of RTCA's globally recognized environmental testing guidance for airborne equipment, DO-160F, was approved on December 6, 2007. The revised document is the result of a comprehensive three year review and update conducted by Special Committee (SC) 135. DO-160 traces its origin to a test document published in March 1952, *Environmental Test Procedures for Airborne Radio Equipment*. Since then, RTCA has revised the test procedures for airborne equipment on a consistent review cycle. The current DO-160 nomenclature began in 1975 and endorsement by the International Organization for Standardization (ISO) as ISO 7137 began in 1987.

SC-135 worked closely with EUROCAE WG-14 to complete the joint document that revises twenty-one of the documents twenty-six Sections. The committee reported significant changes for core Sections 8, 16, 20 and 21 that reflect new capabilities and complexities in operating systems. Section 8, Vibration, expands the description of robust vibration testing. The operating/not-operating requirements were standardized for the robust test portion and sinusoidal scans. The endurance test time and dwell test times were adjusted to reflect the committee's experience with the 2-3 hour test. Section 16, Power Input, was revised throughout to accommodate new tests for 270V dc category equipment. In Section 20, Radio Frequency Susceptibility (Radiated and Conducted), the committee unified the Conducted Susceptibility Test for all equipment categories, placed constraints on the "re-use" of Radiate Susceptibility calibrations and supported reduced test time by allowing a single test level/modulation to address both Continuous Wave (CW) and Square Wave



(SW) test levels/modulations. Section 21, Emission of Radio Frequency Energy, adds a new Category P for an aircraft structure with little shielding and new text that includes GPS receiver antenna requirements submitted by SC-159, GPS. GPS band protection notches were added to the Category P radiated limit lines.

DO-160F is maintained by the committee and through knowledgeable Change Coordinators assigned to each of the twenty-six Sections. The Change Coordinators have given freely of their time to answer questions from document users, maintain document integrity and recommend revision changes. Recommended inputs from the Change Coordinators were instrumental in adding new guidance that discusses the applicability of test results after changes to the equipment or configuration, adding new drip rates in Section 10, Waterproofness, and in Section 15, Magnetic Effect, improving the test description and adding a New Category Y for measurements made immediately adjacent to the unit under test.

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