

**Clearance Record
DOCUMENT COMMENT LOG**

Originating Office: AIR-120 POC:	Document Description:	Reviewer: Public	Reviewing Organization:	Date of Review:
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Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
AIRBUS	Page 3 §5	The battery manufacturer shall provide with the battery charger characteristics. This must be added in the chapter 5 “application data requirements”	For some aspects (like endurance, capacity...) the battery performance relies on the associated battery charger. The TSO specifies most of the time for the charger “...be charged at a constant voltage of 28.5V+/- 0.1V or using a dedicated charger for 1.0 +/- 0.05h...” Therefore, the battery manufacturer shall provide with the relevant data for the charger to be used in association with the battery to ensure that battery performance demonstrated through DO293A tests will be met when the TSO battery will be installed on the A/C.	The following paragraph is proposed to be added in the §5a: - “(-) The battery charger minimum performance characteristics (to ensure battery meet the TSO performances required by DO293A, §2)”	Not Accepted – The battery manufacturer can include information about the battery charger characteristics in the manual required in Section 5.a. of the TSO, but the FAA does not require battery charger characteristics to be submitted to the FAA under all circumstances. If the FAA needs more specific data, Section 6 of the TSO requires the battery manufacturer to make that additional information available.

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AIRBUS	Page 2 §3d	The “test conditions specified in section 3 of RTCA/DO-293A” are not exhaustive.	The environmental qualification should also cover the EMC/HIRF/Lightning requirements	The following change is proposed for 3d: “Demonstrate the required performance under the test conditions specified in section 3 of RTCA/DO-293A and section 18 to 23 of DO160.”, using ...	Not Accepted – EMC, HIRF, and Lightning tests are not minimum requirements for all TSO-C173 batteries. Some batteries are not required to be tested for these environmental characteristics because of where they will be installed. While not required, the battery manufacturer may still elect to conduct EMC, HIRF, and Lightning tests to support installation.
AIRBUS	Page 2 §3c,d	The TSO section 3 c and 3d make reference to sections 2 and 3 of RTCA/DO293A for functional and environmental qualifications. Within RTCA/DO293A section 2, battery charger is identified as :” The battery shall be serviced and charged in accordance with the manufacturer’s instruction or using the	For some aspects (like endurance, capacity...) the battery performance relies on the associated battery charger.	The following paragraph is proposed to be added in the §5a: “(-) The characteristic of the battery charger used during qualification as per RTCA/DO293A	Not Accepted – The battery manufacturer can include information about the battery charger characteristics in the manual required in Section 5.a. of the TSO, but the FAA does not require battery charger characteristics to be submitted to the FAA under all circumstances. If the FAA needs more specific data, Section 6 of the TSO requires the

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		<p>dedicated charger or as required in the design documentation.” The characteristic of the battery charger used during qualification test must be defined et made available</p>			<p>battery manufacturer to make that additional information available.</p>
AIRBUS	Page 3 paragraph 5 a1 and a2	There is no guideline or list to explain what is expected as limitation and as deviation	Limitations and deviations may have impact on the batteries integration in the aircraft	To provide a list or a guideline for the word “limitations “ and the word “deviations”	No Change – There are no specific requirements on these topics that can be specified for TSO-C173 batteries. The FAA provides general guidance on these topics in other documents (e.g., AC 21-46, AC 21-50, Order 8150.1C).