

TERMS OF REFERENCE

**Special Committee SC-235
Non-Rechargeable Lithium Batteries
(Version 5)**

ORIGINAL REQUESTOR:

Organization	Person
Federal Aviation Administration	Peggy Gilligan Assoc. Adm. For Aviation Safety

SC LEADERSHIP:

Position	Name	Affiliation	Telephone	Email	Change
Chair	John Trela	Boeing	425-234-9630	john.a.trela@boeing.com	
GAR	Norman Pereira	FAA/AIR-133	202-267-1639	norman.pereira@faa.gov	
Secretary	Jeff Densmore	Radiant Power	941-893-6810	jdensmore@radiantpowercorp.com	

BACKGROUND:

This committee was established to update DO-227, *Minimum Operational Performance Standard for Lithium Batteries*, that was published June 23, 1995. The standard did not address larger lithium batteries. Additionally, technology and the understanding of non-rechargeable lithium battery technology advanced and the use of non-rechargeable lithium batteries in avionics and cabin equipment had increased. DO-227A was published on September 21, 2017.

Original support for this activity included:

- The Rechargeable Battery Association (PRBA) and Panasonic. Boeing has also contacted other suppliers.
- The Boeing Company, Gulfstream and Cessna. Boeing has also contacted Airbus and Embraer.

SC-235 was Sunset at the completion of DO-227A. Since its release, several equipment manufacturers have certified equipment in accordance with the MOPS. These activities have

resulted in potential changes and clarifications to the document, possibly modifying requirements and procedures. One specific comment has come from EASA. SC-235 went to Active Monitor Status in March 2020 to review requests received. After several Plenaries to review these inputs, the group felt a revision to the document is warranted.

DELIVERABLES:

Product	Description	FRAC Completion Due Date*	Change
DO-227B	Minimum Operational Performance Standard for Non-Rechargeable Lithium Batteries	March 2022	“None”

*Note: Final Review and Comment (FRAC) completion Due Date refers to the date that the committee plenary approves the document after completing the FRAC Process. SCs should submit the final document at least 45 days before the PMC meeting where it will be considered approval.

SCOPE AND COORDINATION:

To update guidance for non-rechargeable lithium batteries permanently installed on aircraft.

ENVISIONED USE OF DELIVERABLE(S)

The guidance developed by this special committee will be used as the basis for an FAA Technical Standard Order (TSO), such as TSO-C142b, Non-Rechargeable Lithium Cells and Batteries, and referenced in an Advisory Circular.

SPECIFIC GUIDANCE:

The special committee should develop a work program, with schedule and milestones, to accomplish the following terms of reference:

- Update RTCA DO-227A for Non-Rechargeable Lithium battery to incorporate the latest understanding of lithium battery technology, including battery testing and installation considerations.
- Provide draft documents for review.
- Review and incorporate comments as appropriate.
- Coordinate developed guidance with the FAA and EASA.
- Support the FAA to concurrently create implementation documents (e.g., Advisory

Circular, TSO).

In order to accomplish this Terms of Reference the SC should:

- Review the terms of reference and recommend changes to the Program Management Committee based on inputs from special committee members and interested parties.
- Invite participation from interested parties, including equipment manufacturers, aircraft manufacturers, component suppliers, airlines and aircraft operators, and modification centers.
- Establish communications with and invite participation by appropriate groups, such as GAMA, A4A, AEA, NBAA, EUROCAE, PRBA and World Airline Entertainment Association.

INITIAL DOCUMENTATION - the following documents should be made available to this committee.

Documents	Intended Use
RTCA DO-227A	Review and use where applicable
TSO-C142b Non-Rechargeable Lithium Cells and Batteries	Review and use where applicable

TERMINATION:

When the scope of this Terms of Reference is complete, the committee will recommend to the PMC that the committee Sunset, go back to Active Monitoring Mode, or spend a period of time in Hiatus. Any change/extension of the committee's work program requires prior PMC approval.