



121 North Henry Street
Alexandria, VA 22314-2903
T: 703.739.9543
E: arsa@arsa.org
www.arsa.org

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Daniel J. Elgas
John M. Lee
Tony White
Norman Pereira

daniel.j.elgas@faa.gov
john.lee@faa.gov
tony.white@faa.gov
norman.pereira@faa.gov

RE: Repairs to TSOA'd Items

Gentlemen,

Several members of the Aeronautical Repair Station Association have reported the agency has prohibitions on major repairs to technical standard order authorization (TSOA'd) articles. Since nothing in [14](#) CFR prohibits the development of independent repairs on those items, the association has been asked to seek clarity.

In 2024, an ARSA member was notified by a designated engineering representative that an approval the DER had issued on a major repair to a TSOA'd article was "withdrawn" by the agency. Since that time the company has attempted to obtain reapproval of the repair specification but has encountered numerous roadblocks. Similarly, other members have reported unusual demands, statements, and requirements regarding major repairs that have been developed for other TSOA'd articles.

Many of these roadblocks are based on lack of knowledge and misconceptions. In italics are statements made by FAA representatives regarding non-design approval holder developed repairs (major and minor) on TSOA'd items.

(1) *"The FAA lithium battery group states the FAA does not allow repair of a TSO C142a lithium battery in the field".*

The FAA cannot prohibit repairs on an article short of an airworthiness directive (AD). Any "spare part"¹ for a civil aviation product may be repaired. The "lithium battery group" has no authority to issue an AD and repairs on TSOA'd items are clearly allowed under part [43](#), the regulation that controls maintenance.

(2) *"I do not believe [OEM] would allow anyone to repair their batteries. It has to be sent back to the battery OEM to be addressed accordingly."*

The only "person" that can authorize repairs on articles installed on aircraft with U.S. certificates of airworthiness is the FAA. "OEMs" (a term that has no meaning under 14 CFR) have no authority to perform repairs, only alterations and certain inspections. Please read §§ [43.1](#) and [43.3](#). Repair stations may perform maintenance, which includes repairs. Please read the definition of [maintenance](#) in section [1.1](#).

¹ See, 49 U.S.C § [40102\(a\)\(43\)](#) "spare part" means an accessory, appurtenance, or part of an aircraft (except an aircraft engine or propeller), aircraft engine (except a propeller), propeller, or appliance, that is to be installed at a later time in an aircraft, aircraft engine, propeller, or appliance."

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(3) *"I never had a good understanding of what the FAA allows for repairs and alterations, having the attitude that whatever FSDO allows is what the FAA allows."*

Please read § 43.13. The FAA "allows" any maintenance actions (e.g., repairs and replacement of parts) that return the item worked on to at least its original (or properly altered) condition.

For future reference, the regulations for maintaining items that have been released from a production approval holder's quality system are contained in part 43. The FAA has other rules associated with operating aircraft that individuals in Aircraft Certification may read for personal understanding.

(4) *"Changes of OEM components may render the TSO C142a testing as suspect."*

All maintenance must return an article to at least its original or properly altered condition. While passing a TSO required test would certainly establish that fact, it may not be enough to ensure installation on a type certificated product.

Determinations on eligibility for installation are made by those certificate holders authorized under part 43, not under part 21. Please read the definition of maintenance in section 1.1, which includes the replacement of parts.

(5) *"Changes to a TSO require the removal of the TSO marking."*

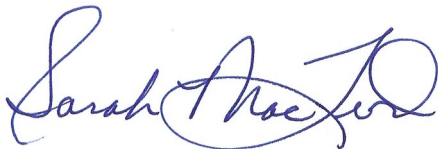
Repairs do not introduce *technical* changes or invalidate the TSO. The repair must result in a condition at least equal to the original. Please read section 43.13.

Using different internal piece parts, with different part numbers, or from different manufacturers does not automatically change the original design conditions. Many internal items are obsolete, and equivalent materials can yield the same *technical* result.

Production approval holder part marking need not be removed for any reason during a repair. The marking may be enhanced, updated, or changed in accordance with design approval holder (DAH) maintenance instructions *or other methods, techniques, and practices acceptable to the FAA*.

Please arrange a meeting in the immediate future to address this issue. I will accommodate almost any date or time available.

Your Servant,



Sarah MacLeod
Executive Director
M: 703.785.6605
E: sarah.macleod@arsa.org

cc: Mallory Naill
Paul Bernado
Victor Wicklund
David A. Howard

mallory.naill@faa.gov
paul.bernado@faa.gov
victor.wicklund@faa.gov
david.a.howard@faa.gov