

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Subject: DISPOSITION OF UNSALVAGEABLE AIRCRAFT PARTS AND MATERIALS

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Advisory Circular No.: 21-38

Initiated by: AIR-200

1. PURPOSE.

This advisory circular (AC) provides information and guidance to persons involved in the sale, maintenance, or disposal of aircraft parts. It provides information and guidance to prevent unsalvageable aircraft parts and materials from being sold as serviceable parts and materials. It provides one means, but not the only means, of complying with 14 CFR Part 21, Certification Procedures for Products and Parts, requirements for control of rejected parts and materials.

2. RELATED FEDERAL AVIATION REGULATIONS AND ADVISORY CIRCULARS.

- a. 14 CFR Part 21, Certification Procedures for Products and Parts.
- b. Advisory Circular 20-62, Eligibility, Quality, and Identification of Approved Aeronautical Replacement Parts, provides information on control of aeronautical replacement parts.
- c. Advisory Circular 21-29, Detecting and Reporting Suspected Unapproved Parts, provides information and guidance for detecting and reporting suspected unapproved parts.

3. BACKGROUND.

It is common practice for possessors of aircraft parts to dispose of unsalvageable parts and materials by selling, discarding, or transferring such items. In some instances, these items have reappeared for sale and in the active parts inventories of the aviation community. Misrepresentation of the status of parts and material and the practice of making such items appear serviceable have resulted in the use of unsalvageable nonconforming parts and materials.

4. TYPES OF PARTS AND MATERIALS THAT MAY BE MISREPRESENTED.

Persons disposing of unsalvageable aircraft parts and materials should consider the possibility of such parts and materials later being misrepresented and sold as serviceable parts and materials. Caution should be exercised to ensure that the following types of parts and materials are disposed of in a manner that does not allow them to be returned to service:

- a. Parts with non-repairable defects, whether visible or not to the naked eye.
- b. Parts that are not within the specifications set forth by the approved design, and cannot be brought into conformance with applicable specifications.

- c. Parts and materials for which further processing or rework cannot make them eligible for certification under a recognized certificate holder's system.
- d. Parts subjected to unacceptable modification or rework that is irreversible.
- e. Life-limited parts that have reached or exceeded their life limits, or have missing or incomplete records.
- f. Parts that cannot be returned to airworthy condition due to exposure to extreme forces or heat.
- g. Principal structural elements (PSE) removed from a high-cycle aircraft for which conformity cannot be accomplished by complying with the applicable aging aircraft airworthiness directives.

5. METHODS TO PREVENT MISREPRESENTATION OF UNSALVAGEABLE PARTS AND MATERIALS.

- a. Persons disposing of unsalvageable aircraft parts and materials should, when appropriate, mutilate those parts and materials prior to release. Mutilation should be accomplished in such a manner that the parts become unusable for their original intended use. Mutilated parts should not be able to be reworked or camouflaged to provide the appearance of being serviceable, such as by re-plating, shortening and re-threading long bolts, welding, straightening, machining, cleaning, polishing, or repainting.
 - (1) Mutilation may be accomplished by one or a combination of the following procedures, but is not limited to:
 - (a) Grinding.
 - (b) Burning.
 - (c) Removal of a major lug or other integral feature.
 - (d) Permanent distortion of parts.
 - (e) Cutting a hole with cutting torch or saw.
 - (f) Melting.
 - (g) Sawing into many small pieces.
 - (2) The following procedures are examples of mutilation that are often less successful because they may not be consistently effective:
 - (a) Stamping (such as a stamped "R" on a part).
 - (b) Spraying with paint.
 - (c) Hammer marks.
 - (d) Identification by tag or markings.
 - (e) Drilling small holes.
 - (f) Sawing in two pieces. Persons who rework unsalvageable parts and materials may be highly skilled technicians and have been known to rejoin parts cut in two pieces in such a manner that the mutilation proves difficult to detect.
- b. Persons disposing of unsalvageable aircraft parts and materials may choose to release those parts for legitimate non-flight uses, such as for training and education, research and

development, or for non-aviation applications. In such instances, mutilation may not be appropriate. The following methods should be used to prevent misrepresentation:

- (1) Permanently marking or stamping the parts, subpart, and material as "**NOT SERVICEABLE.**" (Ink stamping is not an acceptable method);
- (2) Removing original part number identification;
- (3) Removing data plate identification;
- (4) Maintaining a tracking or accountability system, by serial number or other individualized data, to record transferred unsalvageable aircraft parts and materials; and
- (5) Including written quality assurance procedures concerning disposition and disposal of such parts and materials in any agreement or contract transferring such parts and materials.

NOTE: Unsalvageable or expired life-limited parts and materials should not be released to any person or organization who may end up placing the parts and materials back in actual use, due to the criticality of part and material failure and the potential safety threat.

- c. Organizations handling unsalvageable or expired life-limited aircraft parts and materials should establish secure areas in which to segregate such items from active serviceable inventories and to prevent unauthorized access. Caution should be exercised to ensure that these parts and materials receive the appropriate final disposition.
- d. Manufacturers producing approved aircraft parts should maintain records of serial numbers for "retired" life-limited or other critical parts. In such cases, the owner who mutilates applicable parts is encouraged to provide the original manufacturer with the data plate and/or serial number and final disposition of the part.
- e. All purchasers of aircraft parts and materials should ensure that misrepresented unsalvageable parts and materials are not received into active inventory. The following are examples of conditions to be alert for when receiving parts:
 - (1) "New" parts showing signs of rework.
 - (2) Used parts showing signs of unapproved or inappropriate repair.
 - (3) Parts with poor workmanship or signs of rework in the area of the part number or serial number inscription.
 - (4) Used parts lacking verifiable documentation of history and FAA approval.
 - (5) Parts with prices "too good to be true."

- (6) Questionable part numbers, fraudulent or suspicious Technical Standard Order or FAA-Part Manufacturer Approval markings and/or re-identification, stamp-overs or vibro-etching on the data plate.
- (7) Parts delivered with photocopied or missing maintenance release tags.
- (8) Parts with a finish that is inconsistent with industry standards (e.g., discoloration, inconsistencies, resurfacing).
- (9) New parts sold with maintenance release tags reflecting a status other than new.
- (10) Parts with poor documentation exhibiting incomplete or inconsistent part identity information.
- (11) Intact "scrap" unsalvageable parts offered in bulk weight for prices higher than for mutilated parts with identical weight and content.

6. SUSPECTED UNAPPROVED PART(S) (SUP).

Suspected unapproved parts should be reported via the FAA Form 8120-11, SUP Notification, or the Aviation Safety Hotline toll free number, 1-800-255-1111, as referenced in AC 21-29, Detecting and Reporting Suspected Unapproved Parts.

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