UNSALVAGEABLE ITEM MANAGEMENT
GUIDANCE IN SUPPORT OF AS/EN/SJAC 9147

Rev. NEW
1 October 2018
SCMH www.iaqg.org/scmh Section 3.13.2
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Intent of Guidance

The intent of this guidance is to provide means of compliance and illustrations to meet the future 9147 standard requirements.

This guidance also provides examples of inadequate means of compliance that do not meet positive control and mutilation requirements.
Disposition Decision:
Action taken by the organization to assign the disposition of nonconforming or unserviceable items (including over shelf life items and over life-limited items), or surplus for the following categories:
- Rework, repair
- Use as-is
- Return to customer
- Reject to supplier
- Scrap

Item:
Any material, part, spare part, component, functional unit, equipment, software, system or aircraft that can be individually considered.
Terms and Definitions

Mutilation:
Irreversible alteration or change rendering the item beyond repair and incapable of being reworked.

Reclassification:
Action to re-use an item for non-airworthy purpose (e.g., exhibition, training, tooling, test devices, mock-ups, jigs).

Scrapping:
Mutilation, disposal with traceability, or reclassification of an unsalvageable item.
Terms and Definitions

Unsalvageable:
An item that does not conform to its approved design and cannot be restored to a conforming condition, or an item declared as not to be used for its airworthy intended purpose.
Note: An unsalvageable item cannot be restored to an airworthy condition.

Unserviceable:
An item that does not conform to its approved design.
Note: An unserviceable item may be restored to an airworthy condition.
Basic Attributes of an Unsalvageable Item Management Program

• Establish and maintain an effective unsalvageable item management program.
  - This involves using a “continual improvement” cycle approach (see diagram on next page) that proactively addresses the risk to use unsalvageable items within aviation, space, and defense products to improve and guarantee the performance, reliability and safety of these products.

• Organizations may vary in their method of implementing this approach.
The future 9147 standard provides the scope, ways to implement, maintain and improve the unsalvageable item management program. The next pages of this document illustrate the “DO“ actions.
Ways of Scrapping
Physical Identification

These unsalvageable stator vanes are tagged with a red label.
Physical Identification

This unsalvageable metallic plate is physically identified by permanent red paint.

Translation: Scrap
Segregation

Unsalvageable items quarantined in a locked cage with proper physical identification.
Segregation

Locked containers to positively control some unsalvageable items
After the segregation, crushing the whole Printed Circuit Board (PCB) ensures its mutilation and prevent the reuse of the embedded software.
Segregation

Segregation is ensured by the locked container with a secured slot
Inadequate Segregation

Inadequate segregation and positive control as the container is not locked.
Mutilation

Mutilation may be accomplished by one or a combination of the following procedures, but is not limited to:

• Grinding
• Burning
• Removal of a major integral feature
• Permanent distortion of parts
• Cutting a significant size hole with a cutting torch or saw
• Melting
• Sawing into many small pieces
• Removing manufacturer’s identification, part, lot, batch, and serial numbers
Mutilation

The following procedures are examples of mutilation that are often less successful because they may not be consistently effective:

- Stamping (such as a stamped “R” on a part)
- Spraying with paint
- Hammer marks
- Identification by tag or markings
- Drilling small holes
- Removal of a lug or other integral feature
- Sawing in two pieces
Definition:
Irreversible alteration or change rendering the item beyond repair and incapable of being reworked.
Mutilation

Composite air ducts were crushed.
Mutilation

Structural part was cut with a saw.
Mutilation

Tire was cut on its sidewall.
Mutilation

Radome antenna was permanently distorted
Inadequate Mutilation

Inadequate mutilation:
Small notch cut into a large metallic plate.

The damage is capable of being reworked, not beyond repair and therefore is not a mutilation.
Inadequate Mutilation

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Inadequate mutilation: The part is sprayed with paint and so physically identified.

It is not beyond repair, not irreversible, is capable of being reworked and therefore is not a mutilation.
Unsalvable hard alloy parts difficult to mutilate that are awaiting:
- disposal with traceability to an approved external provider or,
- witness of their mutilation or destruction by an external provider.
Disposal with Traceability

The unsalvageable extinguisher is an over shelf life item that is awaiting disposal with traceability to an approved external provider who will recycle it without risk of resurfacing on the market.
Reclassification

This oxygen bottle has been reclassified as a mock-up for exhibition.

Translation: Mock-up
Reclassification

This reclassified Printed Circuit Board (PCB) is used for training purposes.
Summary

Unsalvageable item management program is a cultural mindset. Raising employee awareness to practice the unsalvageable item management program is key. It will be successful when this program objectives are understood by all interested parties who will consistently follow it. This presentation is intended as supplemental information in support of the future 9147 standard unsalvageable item management program requirements. This material should be used in conjunction with the standard.

References:
• Airline Suppliers Association (ASA) Best Practice-Disposition of Unsalvageable Aircraft Parts
Access the SCMH by going to: www.iaqg.org/scmh

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