ADVISORY CIRCULAR

CAA-AC-AWS029
November 2022

AUTHENTICITY AND SERVICEABILITY OF AIRCRAFT PARTS

1.0 PURPOSE

This Advisory Circular (AC) provides guidance and information to be used by Operators, Aircraft Maintenance Engineers, and Approved Maintenance Organizations on authenticity and serviceability of aircraft parts when evaluating an operator's Maintenance support

2.0 REFERENCES

a) Civil Aviation (Air Operator Certification and Administration) Regulations, 2022
b) Civil Aviation (Approved Maintenance Organization) Regulations, 2022.
c) Civil Aviation (Operation of Aircraft - Commercial Air Transport-Aeroplanes) Regulations, 2022
d) Civil Aviation (Airworthiness of Aircraft) Regulation, 2022
e) Civil Aviation (Safety Management) Regulations 2022
f) Form: AC-AWS029

3.0 GUIDANCE AND POCEDURES

3.1 General Information

Although there is no regulatory requirement for the Industry to report bogus or un-approved parts to the Authority, it is required, the industry to consult this Authority when in doubt.

3.2 Verification

When a report of suspected bogus parts is received, the operator shall establish exactly why such parts are suspected of being bogus or un-approved prior to forwarding such reports to other authorities. A traceability check must be done to establish the source of the part and to verify authenticity of the associated documentation and shipment details (where applicable).

3.3 Approved Part

An approved part is one whose design has been found to be acceptable to the State of Design, whose proper manufacture has been approved by the State of Manufacture, and that has been found to be in a condition for safe operation by the Authority.

Note: Standard parts such as fasteners are considered as approved parts when they are in compliance with a national or industry accepted standard and when referenced in the type design of the particular aircraft.

3.4 Unapproved-Parts

Unapproved parts not meeting the criteria described in 3.3 above are considered to be unapproved.
Any part not supported by the required documentation would also be considered to be unapproved. Unapproved parts also include those parts improperly returned to service, for example:

a) Parts supplied directly to the end user by a contractor without direct ship authority from the design approval holder and the State of Manufacture to do so.
b) Parts maintained or approved for return to service by a person or organization not approved to do so.
c) Parts not maintained in accordance with the requirements of the applicable approved data; and
d) Parts having reached their life limit, including, if applicable, any shelf life limit

3.5 Reporting Findings

If there is evidence to prove the part is not genuine or if the part is suspected of being un-approved, inspectors shall note down all relevant details in standardized reporting format that will include the following.

a) Source of information on suspected bogus part
b) Specific location where part was found.
c) Details of suspected part (i.e. part number, serial number) etc
d) Particular colors, markings, dimensions and features common to the unapproved part which distinguish it from the genuine item, and the nature of any accompanying documentation.
e) Information on how part was accepted into the AMO system (where applicable)
f) Corresponding reference in manufacturer's Illustrated Parts Catalogue (IPC) on the genuine part details
g) If found in service, details relating to part fitment and certifying personnel
h) Any other relevant information

3.5.1 Using the information gathered inspectors should make an analysis and provide details to the Airworthiness Manager. Where it is very evident the part is un-approved, it should be immediately isolated for safety reasons. Even in cases where there is doubt on the

origins of a part, it should be removed from service and isolated until a conclusion is reached.

3.5.2 Reporting may be done by electronic mail (e-mail), fax of any other means viewed to be most appropriate. For record and follow-up purposes, reporting must be in writing at all times.

3.5.3 If there is reason to believe these parts could have been acquired from a bogus parts distributor or from a source that may continue to supply suspected parts, the Airworthiness manager shall ensure this is communicated to the industry through the most appropriate means and without delay.

4.0 Unapproved parts reporting

4.0.1 Systems used by end users, to report to the Manufacturer / Type Certificate holders and the Authority, are intended to provide widespread warning of the detection of unapproved parts so that operators of similar equipment can be made aware as soon as possible. In view of the likely random appearance of unapproved parts, access to reporting system must be easy and available at all reasonable times. It follows that publicity for the reporting system (and programs generally) should be widespread.

4.0.2 In order to obtain as much information as possible from a report of a suspected unapproved part, it is necessary to have a standardized reporting format. Information required will include part description and from where received; part number and (if applicable) serial number; particular colour, markings, dimensions and features common to the unapproved part which distinguish it from the genuine item; and the nature of any accompanying documentation.

4.0.3 At any time, a part is deemed to be suspect, it and the accompanying documentation, if any, should be quarantined immediately and held until the body responsible for processing the reports is satisfied that the evidence is no longer required or until the authenticity of the part has been established.

4.0.4 Some reports of suspected unapproved parts will eventually turn out to be false as further information becomes available in the form of supporting documentation etc. A successful reporting system should accept such false alarms and the wasted effort they generate in the knowledge that to discourage such reports might eventually lead to the suppression of a genuine report.

4.0.5 Form:AC-AWS029 shall be completed and uploaded to CAA website: www.caa.go.ug; e-services voluntary/mandatory reporting system.

5.0 Parts removed from an aircraft no longer in service

5.0.1 Aircraft withdrawn from service are often used as a source of spare parts. These parts, although serviceable at the time the aircraft was placed in storage, may have been affected adversely by storage conditions, including especially environmental factors, or by the length of storage.

5.0.2 It is important that the removal process be planned and controlled in a manner as close as possible to that adopted for routine maintenance tasks on in-service aircraft. The following points in particular should be considered:

a) The means by which the part is removed should be in accordance with the approved maintenance manuals, using the tooling specified.
b) Adequate access equipment should be provided.
c) If conducted in the open, disassembly should cease during inclement weather.
d) All work should be carried out by appropriately qualified maintenance personnel.
e) All open connections should be blanked; and
f) A protected and enclosed quarantine storage area for the parts being removed should be provided in the immediate vicinity of the area.

5.0.3 An assessment for condition and eventual return to service for each removed part will need to be conducted by a suitably approved organization. The extent of the work necessary before the part is returned to service may, depending on the factors 5.2 range from a simple external visual inspection to a complete overhaul.

6.0 Parts recovered from aircraft involved in accidents

6.0.1 When an aircraft has been involved in an accident, the title may pass from the insured owner to other persons (e.g. aircraft insurers); this salvage may be offered for sale either complete or as separate items in an "As is, where is" condition. While some items may be totally unaffected by the accident or incident which caused the aircraft to be declared as salvage, it is essential to obtain clear evidence that this is the case. If such evidence cannot be obtained, the item may not be returned to service.

6.0.2 Before overhaul and reinstallation can be considered, all such items must therefore be subject to competent assessment and inspection in the light of adequate knowledge of the circumstances of the accident, subsequent storage and transport conditions, and with evidence of previous operational history obtained from valid airworthiness records. Confirmation of this assessment in the form of an airworthiness release is essential.

6.0.3 In particular, if a crash load is sufficient to take any part above its proof strength, residual strains may remain which could reduce the effective strength of the item or otherwise impair its functions. Loads higher than this may of course crack the item, with even more dangerous potential. Further, a reduction in strength may be caused by virtue of the change of a material's characteristics following overheat from a fire.

6.0.4 It is therefore of the utmost importance to establish that the item is neither cracked, distorted or overheated. The degree of distortion may be difficult to assess if the precise original dimensions are not known, in which case there is no option but to reject the item. Any suggestion of overheating would be cause for a laboratory investigation into significant change of material properties.

7.0 Control of unserviceable parts

7.0.1 A part shall be considered unserviceable in any one of the following circumstances:

a) Expiry of the service life limit as defined in the maintenance program.
b) non-compliance with the applicable airworthiness directives or other continuous airworthiness requirement mandated by the Airworthiness Authority;

c) absence of the necessary information to determine the airworthiness status or eligibility for installation;
d) evidence of defects or malfunctions;
e) Involvement in an incident or accident likely to affect its serviceability.

Note: Unserviceable parts must me identified and stored in a secure location until a decision is made on the future status of such parts.

8.0 Disposal of scrapped parts

8.0.1 Those responsible for the disposal of scrapped aircraft parts and materials should consider the possibility of such parts and materials being misrepresented and sold as serviceable at a later date. Caution should be exercised to ensure that the following types of parts and materials are disposed of in a controlled 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 conformity with applicable specifications.
c) Parts and materials for which further processing or rework cannot make them eligible for certification under an approved system.
d) Parts subjected to unacceptable modifications 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 an airworthy condition due to exposure to extreme forces or heat (see 5.0); and
g) Principal structural elements removed from a high-cycle aircraft for which conformity cannot be accomplished by complying with mandatory requirements applicable to aging aircraft.

8.0.2 Scrapped parts should always be segregated from serviceable parts and when eventually disposed of should be mutilated or clearly and permanently marked. This should be accomplished in such a manner that the parts become unusable for their original intended use and unable to be reworked or camouflaged to provide the appearance of being serviceable, such as by re-plating, short peening and rethreading long bolts, welding, straightening, machining, cleaning, polishing, or repainting.

8.0.3 Mutilation may be accomplished by one or a combination of the following procedures:

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,
h) any other method accepted by the airworthiness authority on a case-by-case basis.

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

a) stamping or vibro-etching,

b) spraying with paint,

c) small distortions, incisions, or hammer marks,

d) identification by tag or markings,

e) drilling small holes,

f) Sawing in two pieces only.

8.0.5 Since manufacturers producing approved parts should maintain records of serial numbers for "retired" certified life-limited or other critical parts, the organization that mutilates a part should provide the original manufacturer with the data plate and/or serial number and final disposition of the part.

8.0.6 When scrapped parts are disposed of for legitimate non-flight uses, such as training and education aids, research and development, or for non-aviation applications, mutilation is often not appropriate. In such cases the parts should be permanently marked indicating that they are not serviceable.

8.0.7 The following methods should be used to prevent the part re-entering the aviation supply system:

a) Permanently marking or stamping the part, as "NOT SERVICEABLE." (ink stamping is not an acceptable method)'

b) removing original part number identifications.

c) removing data plate identification.

d) maintaining a tracking or accountability system, by serial number or other individualized data, to record transferred unsalvageable aircraft parts.

e) Including written procedures concerning disposal of such parts in any agreement or contract transferring such parts.

Note: ***Unsalvageable parts should not be released to any person or organization that is known to return unsalvageable parts back into the aviation supply system due to the potential safety threat.***

Uganda Civil Aviation Authority

APPENDIX 1

Form:AC-AWS029

SUSPECTED UNAPPROVED PARTS REPORT FORM

UGANDA CIVIL AVIATION AUTHORITY **SUSPECTED UNAPPROVED PARTS REPORT**		
Refer to page 2 for instructions on how to complete this form.		
1. Date the Part was discovered:	**2. Part Name:**	
3. Part Number:	**4. Part Serial Number:**	
5. Quantity:	**6. Assembly Name:** **Assembly Number:**	**7. Aircraft Make & Model:**
8. Name, Address, and Description of the Company or Person Who Supplied or Repaired the Part:		
□ **Operator Certificate #**	□ **Supplier**	
□ **AME – Certificate #**	□ **Production Approval Holder**	
□ **AMO Certificate #**	□ **Manufacturer**	
□ **Distributor**	□ **Other**	
□ **Owner/Operator**	□ **Unknown**	
9. Description of the Issue:		
10. Name and Address of (the Company or Person) Where the Part was discovered:		
Name:	**Street Address:**	
City:	**Physical Location:**	**Code:**
Country:	**Phone Number:**	
Check One of the Following Applicable to the Company or Person who discovered the Part:		
□ **Operator- Certificate #**	□ **CAA Inspector**	
□ **AMEL Certificate #**	□ **CAA/Office of Director General**	
□ **AMO Station - Certificate #**	□ **Police Criminal Investigation Service**	
□ **Distributor**	□ **Other Government Agency**	
□ **Supplier**	□ **Foreign Civil Aviation Authority**	

☐ **Owner/Operator**	☐ **Unknown**
☐ **Other**	
11. Date of This Report:	
12. Check this box if you request anonymity - *Do not complete blocks 13-15*. **13. Name and Address of the Reporter:**	

Name:	**Street Address:**	
City:	**State:**	**ZIP Code:**
Country:		**Phone Number:**
14. Check this box if you request confidentiality.		
15. Check this box if you do not wish to receive an acknowledgment letter.		
16. Check this box if you have attached additional information.		

Instructions for Completing CAA Form AWS029, Suspected Unapproved Parts Report

1. Record the date the part was discovered.
2. Record the part name (or a description of the part).
3. Record the part number or identification number of the part.
4. Record the serial number on the part, if applicable.
5. Record the quantity of parts.
6. Record the assembly name and assembly number (where the part was or could be installed).

Example: Part Name: Strut Part Number: PN 12345 Serial Number: 678 Quantity: 1

Assembly Name: Main Landing Gear Assembly Number: PN 90101112

Note: Record additional part numbers on page 3 or a blank sheet of paper with the following column headers:

Part Name — Part Number — Serial Number — Quantity — Assembly Name — Assembly Number

7. Record the type of aircraft the part was (or could be) installed on.
8. Record the complete name and address of the company or person who produced, repaired, and/or sold the part. Do not list a P.O. Box address unless a street address is not available.

Check the box that describes the company or person. Provide the certificate number, if known.

Operator- The Authority -certificated company or person who undertakes directly by lease, or other arrangement, to engage in air transportation.	**Supplier -** A company or person who furnishes aircraft parts or related services, at any tier, to the producer of a product or part thereof
AME - A person holding a CAA AMEL with airframe and/or powerplant ratings**.**	
AMO – Approved Maintenance Organization	**Manufacturer –** The original equipment manufacturer (OEM.)
Distributor - A broker, dealer, reseller or other person or agency engaged in the sale of parts	**Other-**Record other type of business.
Owner/Operator - The owner or operator of an aircraft.	**Unknown**

9. Record a brief narrative stating why you believe the part is not approved. Include a description of the part (improper configuration, suspect marking, different material, etc.), where it was obtained, and what type of documentation was supplied with it.

10. Record the complete name and address of the location where the part was found. Check the appropriate block to reflect the affiliation of the company or person who discovered the part.

11. Record the date the CAA Form AWS029 is being submitted.

12. Check this box if you request anonymity (do not wish to provide your identity), and do not complete 13, 14 or 15.

13. Record your name, address and phone number, if desired. This information will enable the CAA to contact you for additional information, if necessary.

14. Check this box if you request confidentiality of your personal information recorded in block 13.

15. Check this box if you do not wish to receive a letter acknowledging the CAA's receipt of CAA Form:AC-AWS029.

16. Check this box if you have provided additional information (photos, invoices, certification statements, etc.)

Forward the completed CAA Form AW029, Suspected Unapproved Parts Report, CAA eservices voluntary/mandatory reporting system **OR**

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