



EAC

145_4

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APPROVED AND UNAPPROVED PARTS

145.4.1 GENERAL.

Advisory Circulars (ACs) are issued by the Egyptian Civil Aviation Authority

145.4.2 PURPOSE.

This AC is issued to provide information and guidance to persons and organizations on the usage of aircraft parts and how to differentiate between approved and unapproved parts, also the required reporting for unapproved parts and the responsibilities of stokies and distributors.

145.4.3 APPLICABILITY.

This AC applies to ECAR -145 approved maintenance organizations, AOC holders and owners/operators of aircraft registered in EGYPT, parts distributors.

145.4.4 CANCELLATION.

This is the first AC on this issue.

145.4.5 EFFECTIVE DATE.

This Advisory Circular is effective on 1 July 2014.

145.4.6 REFERENCES.

ECAR part 145 and part 43.

145.4.7 INTRODUCTION.

The ECAR states that Egyptian aircraft shall not be flown if the aircraft or a component fitted on the aircraft has been overhauled, repaired, replaced, modified or maintained, unless a certificate of release to service or an equivalent release document has been issued for that aircraft or component.

For the overhaul, repair, inspection and modification of aircraft, components or equipment and replacements of components and equipment, the work must be undertaken in accordance with approved conditions and procedures; approved components, parts or material must be used and a certificate of release to service must be issued on completion of the work.

This AC provides information and guidance to persons and organizations involved in the maintenance, distribution, sale or control of such aircraft parts. The need to ensure that parts installed on an aircraft meet the design specification and are serviceable is self-evident. The installation of any part failing to meet the intended design requirements degrades those requirements, leading to a degradation of airworthiness

145.4.8 APPROVED PARTS

1-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 State of Registry

Note. — Parts approved pursuant to the above are eligible for installation on a specific aircraft if, and only if, they also meet the approved design data applicable to the particular aircraft they are to be installed on. For example, a seat designed and approved for 9 g forward loads is not eligible for installation on an aircraft which is required to have a seat that is dynamically tested for 16 g.

2- 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.

145.4.9 Un approved parts

Parts not meeting the criteria described in 4.8 above are considered to be Un approved. 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 reaching their life limit, including, if applicable, any shelf-life limit.

145.4.10 Supporting DOCUMENTATION

A documentation process providing written evidence of the acceptability of a part is an essential element of any system designed to ensure that only approved parts are installed on an aircraft. Such a process is intended to provide all relevant information concerning the part to which it refers sufficient to enable a potential installer to readily ascertain its status. Such documents will contain information relating to:

- (a) The authority under which it is issued;
- (b) Reference identification for the purposes of traceability;
- (c) Name, address and approval reference of the issuing organization;
- (d) Work order, contract or invoice number;
- (e) Quantity, description, part number and, if applicable, serial number of the part;
- (f) Relevant information concerning any life limitations, including in- service history records;
- (g) The signature and approval reference of the person issuing the document; and
- (h) Whether the part is new or used.

145.4.11 Precautions to prevent the in advertent acceptance of unapproved parts

1- Documentary evidence of compliance with an approved process will not in itself provide a guarantee against the installation of unapproved parts if the original supplier of such parts knowingly provides false information or otherwise sets out to deceive.

2- It is always necessary to have secondary defences in place designed to give early warning of unapproved parts prior to their release for installation. The primary defence in such cases is a strong, wellinformed and alert parts ordering and receiving system which, through auditing and reports, establishes a satisfactory level of confidence in its parts suppliers and which:

- (a) ensures a continual correlation between parts ordered and parts received;
- (b) is alert to any unauthorized alterations to supporting documentation and to any inability of the supplier to supply the required documentation;
- (c) is aware if a quoted price for the part is significantly lower than that quoted by other suppliers;
- (d) is aware that delivery times are significantly shorter than those quoted by other suppliers ;and
- (e) is aware of parts packaging methods used by approved parts manufacturers, maintenance organizations and distributors, and can detect deviations from these methods.

3- Organizations, particularly approved maintenance organizations and operators, should ensure that all those staff who have routine contact with parts, including especially buyers, stores staff, mechanics and certifying staff, are fully aware of the dangers posed by unapproved parts and also the likely sources. Ample warnings should be given to such staff about accessing any unapproved database. Approved maintenance organizations and operators will also need to ensure that their parts suppliers are fully integrated into the reporting network, and audits will be necessary among staff at intervals to ensure that all remain vigilant to the problem.

145.4.12 UN APPROVED PARTS REPORTING

1- Systems used by end users to report to type certificate holders and regulatory agencies 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 a reporting system should be easy and available at all reasonable times. It follows that publicity for the reporting system (and the programmes generally) should be widespread.

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 and, if applicable, serial numbers; particular colours, markings, dimensions and features common to the unapproved part which distinguish it from the genuine item; and the nature of any accompanying documentation.

3- At any time a part is deemed to be suspect, it and any accompanying documentation 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- Some reports of suspected unapproved parts will eventually turn out to be false as further information becomes available in the form of supporting documentation. 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.

5- A relatively simple database, preferably computer driven, will be required to maintain a record and allow easy processing of reports of suspected unapproved parts. The database should be capable of interrogation such that any common thread within the reports received is readily identified by keyword access. The database itself can be a dedicated system or part of a much larger general occurrence reporting system.

6- In view of the international nature of the aviation industry and in particular the Known international nature of the generation and distribution of unapproved parts, the ability to link national databases is obviously advantageous, the unimpeded cross- flow of information being essential in successfully combating the problem.

145.4.13 PARTS STOCKIES AND DISTRIBUTORS

1- It is recognized that parts stockists and distributors have a significant influence over preventing the use of unapproved parts. Such organizations have an established commercial role of stocking or obtaining parts, often at short notice. Some States approve stockists and distributors but others do not.

2- In airworthiness terms, the parts supplier's role is simply that of a holder of a part and its supporting data for a limited period, the part and data being passed in their entirety to the purchaser. The most effective control is exercised by the purchaser of the parts by ensuring that the part is correct and that the documentation truly reflects the status of the part. Further assurance is provided by the installer purchasing only from those suppliers having a known satisfactory record.

3- Parts distributors may also break down large orders of identical parts into smaller lots for shipment to end users. In this case they should provide documentation that the parts came from the original large order and either issue a second set of airworthiness documentation, if authorised by their State regulatory authority to do so, or attach a copy of the original airworthiness documentation.