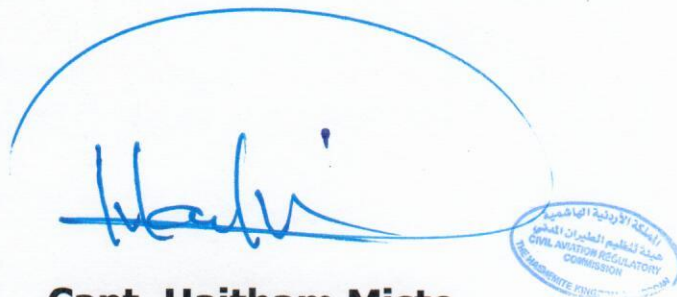


PART-145

Approved Maintenance Organization

This new part of Jordanian Civil Aviation Regulations is hereby adopted under the authority and provisions of the Civil Aviation Law N0. (41) dated 2007, and its amendments.



Capt. Haitham Misto
Chief Commissioner/CEO
Civil Aviation Regulatory Commission

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145.1

I. General

- a) This Part establishes common technical requirements to ensure the continuing airworthiness of aircraft, including any component for installation thereto, which are:
 - i. registered in Jordan, unless their regulatory safety oversight has been delegated to a foreign country and they are not used by Jordanian operator; or
 - ii. registered in a foreign country and used by Jordanian operator, where their regulatory safety oversight has been delegated to Jordan;
- b) Civil Aviation Regulatory Commission (CARC) is the oversight authority for the approval and the continuation of the approval of any Maintenance Organization performing maintenance, preventive maintenance, alterations or servicing of a civil aircraft registered in Jordan or of engines or propellers or components installed on such aircraft.
- c) Any maintenance organization having their principal place of business in Jordan may not conduct any maintenance activity on any Jordanian registered aircraft or components of a civil aircraft unless it is approved by CARC under this Part.
- d) Any maintenance organization having their principal place of business in a foreign country may not conduct any maintenance activity on any civil aircraft or components of a civil aircraft referred in point (a) unless it is accepted by CARC under this Part.

II. Definitions

Within the scope of this Part, the following definitions shall apply:

- (a) 'Aircraft' means any machine that can derive support in the atmosphere from the reactions of the air other than reactions of the air against the earth's surface;
- (b) 'Certifying staff' means personnel responsible for the release of an aircraft or a component after maintenance;
- (c) 'Component' means any engine, propeller, part or appliance;
- (d) 'Complex motor-powered aircraft' shall mean:
 - (1) An aeroplane:
 - i. With a maximum certificated take-off mass exceeding 5700 kg, or
 - ii. Certificated for a maximum passenger seating configuration of more than nineteen, or
 - iii. Certificated for operation with a minimum crew of at least two pilots, or
 - iv. Equipped with (a) turbojet engine(s) or more than one turboprop engine, or
 - (2) A helicopter certificated:
 - i. For a maximum take-off mass exceeding 3175 kg, or
 - ii. For a maximum passenger seating configuration of more than nine, or
 - iii. For operation with a minimum crew of at least two pilots, or
 - (3) A tilt rotor aircraft;

- (e) 'Continuing airworthiness' means all of the processes ensuring that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation;
- (f) 'Critical maintenance task' means a maintenance task that involves the assembly or any disturbance of a system or any part on an aircraft, engine or propeller that, if an error occurred during its performance, could directly endanger the flight safety;
- (g) 'Endangers flight safety' means any instance where safe operation could not be assured or which could lead to an unsafe condition. It typically includes, but is not limited to, significant cracking, deformation, corrosion or failure of primary structure, any evidence of burning, electrical arcing, significant hydraulic fluid or fuel leakage and any emergency system, or total system failure. An AD overdue for compliance is also considered a hazard to flight safety. Inspection for hidden damage following an occurrence, incident or accident shall be taken in consideration.
- (h) 'LA1 aircraft' means the following manned Light Aircraft:
- i. An aeroplane with a Maximum Take-off Mass (MTOM) of 1200 kg or less that is not classified as complex motor-powered aircraft;
 - ii. A sailplane or powered sailplane of 1200 kg MTOM or less;
 - iii. A balloon with a maximum design lifting gas or hot air volume of not more than 3400 m³ for hot air balloons, 1050 m³ for gas balloons, 300 m³ for tethered gas balloons;
 - iv. An airship designed for not more than four occupants and a maximum design lifting gas or hot air volume of not more than 3400 m³ for hot air airships and 1000 m³ for gas airships;
- (i) 'LA2 aircraft' means the following manned Light Aircraft:
- i. An aeroplane with a Maximum Take-off Mass (MTOM) of 2000 kg or less that is not classified as complex motor-powered aircraft;
 - ii. A sailplane or powered sailplane of 2000 kg MTOM or less;
 - iii. A balloon;
 - iv. A hot air ship;
 - v. A gas airship complying with all of the following characteristics:
 - 3 % maximum static heaviness,
 - Non-vector thrust (except reverse thrust),
 - Conventional and simple design of structure, control system and ballonet system, and
 - Non-power assisted controls;
 - vi. A very Light Rotorcraft;
- (j) 'LSA aircraft' means a light sport aeroplane which has all of the following characteristics:
- i. A maximum Take-off Mass (MTOM) of not more than 600 kg;
 - ii. A maximum stalling speed in the landing configuration (V_{S0}) of not more than 45 knots Calibrated Airspeed (CAS) at the aircraft's maximum certificated takeoff mass and most critical center of gravity;

- iii. A maximum seating capacity of no more than two persons, including the pilot;
 - iv. A single, non-turbine engine fitted with a propeller;
 - v. A non-pressurized cabin;
- (k) ‘Large aircraft’ means an aircraft, classified as an aeroplane with a maximum take-off mass of more than 5700 kg, or a multi-engined helicopter;
- (l) ‘Maintenance’ means any one or combination of overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection;
- (m) ‘Organization’ means a natural person, a legal person or part of a legal person; such an organization may be established at more than one location whether or not within the territory of Jordan;
- (n) ‘Pre-flight inspection’ means the inspection carried out before flight to ensure that the aircraft is fit for the intended flight;
- (o) ‘Principal place of business’ means the head office or the registered office of the undertaking within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised;

III. Continuing airworthiness requirements

1. The continuing airworthiness of aircraft and components shall be ensured in accordance with the provisions of Part M.
2. Organizations and personnel involved in the continuing airworthiness of aircraft and components for installation thereto, including maintenance, shall comply with the provisions of Part M and where appropriate those specified in Part-145 and Part-66.

IV. Maintenance organizations approvals

Maintenance organization approvals shall be issued in accordance with the provisions of Part M Subpart F, or the provisions of Part-145.

V. Certifying Staff

Certifying staff shall be qualified in accordance with the provisions of Part-66 and/ or CARC instructions as applicable, except as provided for in points M.606(h), M.607(b), M.801(d) and M.803 of part M and in point 145.30(j) and Appendix IV to Part 145.

VI. Training organization requirement

Organizations involved in the training of Part 66 personnel shall be approved in accordance with Part-147 to be entitled:

- (a) to conduct recognized basic training courses; and/or
- (b) to conduct recognized type training courses; and

VII. CARC measures

1. CARC shall develop acceptable means of compliance (hereinafter called 'AMC') that CARC, organizations and personnel may use to demonstrate compliance with the provisions of this Part.
2. The AMC issued by CARC shall neither introduce new requirements nor alleviate the requirements of the provisions of this Part.

VIII. Entry into force

This regulation shall enter into force on the day following that of its publication in CARC official website.

145.10 Scope

This Part establishes the requirements to be met by an organization to qualify for the issue or continuation of an approval for the maintenance of aircraft and components.

145.15 Application

- (a) An application for the issue or change of an approval shall be made to CARC in a form and manner established by CARC.
- (b) An application for:
 - 1. An initial approval shall be valid for 180 calendar days starting from the date of formal application.
 - 2. A change of approval shall be valid for 90 calendar days starting from the date of formal application.
- (c) Failure to meet this part requirements within the time limits specified in point (b) shall result in cancellation of the application. The applicant may re-submit a new application, for which CARC shall start a new approval process.

145.20 Terms of approval

The organization shall specify the scope of work deemed to constitute approval in its exposition (Appendix IV to Part-M contains a table of all classes and ratings).

145.25 Facility requirements

The organization shall ensure that:

- (a) Facilities are provided appropriate for all planned work, ensuring in particular, protection from the weather elements. Specialized workshops and bays are segregated as appropriate, to ensure that environmental and work area contamination is unlikely to occur.
 - 1. For base maintenance of aircraft, aircraft hangars are both available and large enough to accommodate aircraft on planned base maintenance;
 - 2. For component maintenance, component workshops are large enough to accommodate the components on planned maintenance.
- (b) Office accommodation is provided for the management of the planned work referred to in point (a), and certifying staff so that they can carry out their designated tasks in a manner that contributes to good aircraft maintenance standards.
- (c) The working environment including aircraft hangars, component workshops and office accommodation is appropriate for the task carried out and in particular special requirements observed. Unless otherwise dictated by the particular task environment, the working environment must be such that the effectiveness of personnel is not impaired:
 - 1. temperatures must be maintained such that personnel can carry out required tasks without undue discomfort.

2. dust and any other airborne contamination are kept to a minimum and not be permitted to reach a level in the work task area where visible aircraft/component surface contamination is evident. Where dust/other airborne contamination results in visible surface contamination, all susceptible systems are sealed until acceptable conditions are re-established.
 3. lighting is such as to ensure each inspection and maintenance task can be carried out in an effective manner.
 4. noise shall not distract personnel from carrying out inspection tasks. Where it is impractical to control the noise source, such personnel are provided with the necessary personal equipment to stop excessive noise causing distraction during inspection tasks.
 5. where a particular maintenance task requires the application of specific environmental conditions different to the foregoing, then such conditions are observed. Specific conditions are identified in the maintenance data.
 6. the working environment for line maintenance is such that the particular maintenance or inspection task can be carried out without undue distraction. Therefore where the working environment deteriorates to an unacceptable level in respect of temperature, moisture, hail, ice, snow, wind, light, dust/other airborne contamination, the particular maintenance or inspection tasks must be suspended until satisfactory conditions are re-established.
- (d) Secure storage facilities are provided for components, equipment, tools and material. Storage conditions ensure segregation of serviceable components and material from unserviceable aircraft components, material, equipment and tools. The conditions of storage are in accordance with the manufacturer's instructions to prevent deterioration and damage of stored items. Access to storage facilities is restricted to authorized personnel.

145.30 Personnel requirements

- (a) The organization shall appoint an accountable manager acceptable to CARC who has corporate authority for ensuring that all maintenance required by the customer can be financed and carried out to the standard required by this Part. The accountable manager shall:
1. ensure that all necessary resources are available to accomplish maintenance in accordance with point 145.65(b) to support the organization approval.
 2. establish and promote the safety and quality policy specified in point 145.65(a) and JCAR Part 19.
 3. demonstrate a basic understanding of this Part.
- (b) The organization shall nominate a person or group of persons, whose responsibilities include ensuring that the organization complies with this Part. Such person(s) shall ultimately be responsible to the accountable manager.
1. The person or persons nominated shall represent the maintenance management structure of the organization and be responsible for all functions specified in this Part.

2. The person or persons nominated shall be identified and their credentials submitted in a form and manner established by CARC.
 3. The person or persons nominated shall be able to demonstrate relevant knowledge, background and satisfactory experience related to aircraft or component maintenance and demonstrate a working knowledge of this Part.
 4. Procedures shall make clear who deputizes for any particular person in the case of lengthy absence of the said person.
- (c) The accountable manager under point (a) shall appoint a person(s) with responsibility for monitoring the quality system and safety management system, including the associated feedback system as required by point 145.65(c). The appointed person(s) shall have direct access to the accountable manager to ensure that the accountable manager is kept properly informed on quality, safety and compliance matters.
- (d) The organization shall have a maintenance man-hour plan showing that the organization has sufficient staff to plan, perform, supervise, inspect, quality and safety monitor the organization in accordance with the approval. In addition the organization shall have a procedure to reassess work intended to be carried out when actual staff availability is less than the planned staffing level for any particular work shift or period.
- (e) The organization shall establish and control the competence of personnel involved in any maintenance, development of maintenance programs, airworthiness reviews, management and/or quality audits in accordance with a procedure and to a standard agreed by CARC. In addition to the necessary expertise related to the job function, competence must include an understanding of the application of human factors and human performance issues appropriate to that person's function in the organization. 'Human factors' means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration of human performance. 'Human performance' means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.
- (f) The organization shall ensure that personnel who carry out and/or control a continued airworthiness non-destructive test of aircraft structures and/or components are appropriately qualified for the particular non-destructive test in accordance with the European or equivalent Standard recognized by CARC. Personnel who carry out any other specialized task shall be appropriately qualified in accordance with officially recognized Standards. By derogation to this point those personnel specified in points (g) and (h)(1) and (h)(2), qualified in category B1 or B3 in accordance with Part-66 may carry out and/or control color contrast dye penetrant tests.
- (g) Any organization maintaining aircraft, except where stated otherwise in point (j), shall in the case of aircraft line maintenance, have appropriate aircraft rated certifying staff qualified as category B1, B2, B3, as appropriate, in accordance with Part-66 and point 145.35.

In addition such organizations may also use appropriately task trained certifying staff holding the privileges described in points 66.20(a)(1) and 66.20(a)(3)(ii) and qualified in accordance with Part-66 and point 145.35 to carry out minor scheduled line maintenance and simple defect rectification. The availability of such certifying staff shall not replace the need for category B1, B2, B3 certifying staff, as appropriate.

- (h) Any organization maintaining aircraft, except where stated otherwise in point (j) shall:
1. in the case of base maintenance of complex motor-powered aircraft, have appropriate aircraft type rated certifying staff qualified as category C in accordance with Part-66 and 145.35. In addition the organization shall have sufficient aircraft type rated staff qualified as category B1, B2 as appropriate in accordance with Part-66 and 145.35 to support the category C certifying staff.
 - (i) B1 and B2 support staff shall ensure that all relevant tasks or inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service.
 - (ii) The organization shall maintain a register of any such B1 and B2 support staff.
 - (iii) The category C certifying staff shall ensure that compliance with paragraph (i) has been met and that all work required by the customer has been accomplished during the particular base maintenance check or work package, and shall also assess the impact of any work not carried out with a view to either requiring its accomplishment or agreeing with the operator to defer such work to another specified check or time limit.
 2. in the case of base maintenance of aircraft other than complex motor-powered aircraft have either:
 - (i) appropriate aircraft rated certifying staff qualified as category B1, B2, B3, as appropriate, in accordance with Part-66 and point 145.35 or,
 - (ii) appropriate aircraft rated certifying staff qualified in category C assisted by support staff as specified in point 145.35(a)(i).
- (i) Component certifying staff shall comply with the provisions of Part-66 or CARC instructions as applicable.
- (j) By derogation to points (g) and (h), in relation to the obligation to comply with Part-66, the organization may use certifying staff qualified in accordance with the following provisions:
1. For organization facilities located outside Jordan certifying staff may be qualified in accordance with the national aviation regulations of the State in which the organization facility is registered subject to the conditions specified in Appendix IV to this Part.
 2. For line maintenance carried out at a line station of an organization which is located outside Jordan, the certifying staff may be qualified in accordance with

the national aviation regulations of the State in which the line station is based, subject to the conditions specified in Appendix IV to this Part.

3. For a repetitive pre-flight airworthiness directive which specifically states that the flight crew may carry out such airworthiness directive, the organization may issue a limited certification authorization to the aircraft commander and/or the flight engineer on the basis of the flight crew license held. However, the organization shall ensure that sufficient practical training has been carried out to ensure that such aircraft commander or flight engineer can accomplish the airworthiness directive to the required standard.
4. In the case of aircraft operating away from a supported location the organization may issue a limited certification authorization to the commander and/or the flight engineer on the basis of the flight crew license held subject to being satisfied that sufficient practical training has been carried out to ensure that the commander or the flight engineer can accomplish the specified task to the required standard. The provisions of this point shall be detailed in an exposition procedure.
5. In the following unforeseen cases, where an aircraft is grounded at a location other than the main base where no appropriate certifying staff are available, the organization contracted to provide maintenance support may issue a one-off certification authorization:
 - (i) to one of its employees holding equivalent type authorizations on aircraft of similar technology, construction and systems; or
 - (ii) to any person with not less than five years maintenance experience and holding a valid ICAO aircraft maintenance license rated for the aircraft type requiring certification provided there is no organization appropriately approved under this Part at that location and the contracted organization obtains and holds on file evidence of the experience and the license of that person.

All such cases as specified in this point shall be reported to CARC within seven days after issuing such certification authorization. The organization issuing the one-off authorization shall ensure that any such maintenance that could affect flight safety is re-checked by an appropriately approved organization.

- (k) If the organization performs airworthiness reviews and issues the corresponding airworthiness review certificate for LA1 aircraft not involved in commercial operations in accordance with M.901(1), it shall have airworthiness review staff qualified and authorized in accordance with M.901(1)1.
- (l) If the organization is involved in the development and processing of approval of the maintenance program for LA2 aircraft not involved in commercial operations in accordance with M.201(i)(3), it shall have qualified staff who shall be able to show relevant knowledge and experience.

145.35 Certifying staff and support staff

- (a) In addition to the appropriate requirements of points 145.30(g) and (h), the organization shall ensure that certifying staff and support staff have an adequate understanding of the relevant aircraft and/or components to be maintained together with the associated organization procedures. In the case of certifying staff, this shall be accomplished before the issue or re-issue of the certification authorization.
- (i) 'Support staff' means those staff holding an aircraft maintenance license under Part-66 in category B1, B2 and/or B3 with the appropriate aircraft ratings, working in a base maintenance environment while not necessarily holding certification privileges.
 - (ii) 'Relevant aircraft and/or components', means those aircraft or components specified in the particular certification authorization.
 - (iii) 'Certification authorization' means the authorization issued to certifying staff by the organization and which specifies the fact that they may sign certificates of release to service within the limitations stated in such authorization on behalf of the approved organization.
- (b) Excepting those cases listed in points 145.30(j) and 66.20(a)3(ii) the organization may only issue a certification authorization to certifying staff in relation to the basic categories or subcategories and any type rating listed on the aircraft maintenance license as required by Part-66, subject to the license remaining valid throughout the validity period of the authorization and the certifying staff remaining in compliance with Part-66.
- (c) The organization shall ensure that all certifying staff and support staff are involved in at least 6 months of actual relevant aircraft or component maintenance experience in any consecutive 2-year period.
- For the purpose of this point 'involved in actual relevant aircraft or component maintenance' means that the person has worked in an aircraft or component maintenance environment and has either exercised the privileges of the certification authorization and/or has actually carried out maintenance on at least some of the aircraft type or aircraft group systems specified in the particular certification authorization.
- (d) The organization shall ensure that all certifying staff and support staff receive sufficient continuation training in each two year period to ensure that such staff have up-to-date knowledge of relevant technology, organization procedures and human factor issues.
- (e) The organization shall establish a program for continuation training for certifying staff and support staff, including a procedure to ensure compliance with the relevant points of 145.35 as the basis for issuing certification authorizations under this Part to certifying staff, and a procedure to ensure compliance with Part-66.

- (f) Except where any of the unforeseen cases of point 145.30(j)(5) apply, the organization shall assess all prospective certifying staff for their competence, qualification and capability to carry out their intended certifying duties in accordance with a procedure as specified in the exposition prior to the issue or re-issue of a certification authorization under this Part.
- (g) When the conditions of points (a), (b), (d), (f) and, where applicable, point (c) have been fulfilled by the certifying staff, the organization shall issue a certification authorization that clearly specifies the scope and limits of such authorization. Continued validity of the certification authorization is dependent upon continued compliance with points (a), (b), (d), and where applicable, (c).
- (h) The certification authorization must be in a style that makes its scope clear to the certifying staff and any authorized person who may require to examine the authorization. Where codes are used to define scope, the organization shall make a code translation readily available. 'Authorized person' means the officials of CARC who has responsibility for the oversight of the maintained aircraft or component.
- (i) The person responsible for the quality system shall also remain responsible on behalf of the organization for issuing certification authorizations to certifying staff. Such person may nominate other persons to actually issue or revoke the certification authorizations in accordance with a procedure as specified in the exposition.
- (j) The organization shall maintain a record of all certifying staff and support staff, which shall contain:
1. the details of any aircraft maintenance license held under Part-66; and
 2. all relevant training completed; and
 3. the scope of the certification authorizations issued, where relevant; and
 4. particulars of staff with limited or one-off certification authorizations.
- The organization shall retain the record for at least three years after the staff referred to in this point have ceased employment with the organization or as soon as the authorization has been withdrawn. In addition, upon request, the maintenance organization shall furnish the staff referred to in this point with a copy of their personal record on leaving the organization.
- The staff referred to in this point shall be given access on request to their personal records as detailed above.
- (k) The organization shall provide certifying staff with a copy of their certification authorization in either a documented or electronic format.

- (l) Certifying staff shall produce their certification authorization to any authorized person within 24 hours.
- (m) The minimum age for certifying staff and support staff is 23 years.
- (n) The holder of a category A aircraft maintenance license may only exercise certification privileges on a specific aircraft type following the satisfactory completion of the relevant category A aircraft task training carried out by an organization appropriately approved in accordance with Part-145 or Part-147. This training shall include practical hands on training and theoretical training as appropriate for each task authorized. Satisfactory completion of training shall be demonstrated by an examination or by workplace assessment carried out by the organization.
- (o) The holder of a category B2 aircraft maintenance license may only exercise the certification privileges described in point 66.20(a)(3)(ii) of Part-66 following the satisfactory completion of
 - (i) the relevant category A aircraft task training and
 - (ii) 6 months of documented practical experience covering the scope of the authorization that will be issued.

The task training shall include practical hands on training and theoretical training as appropriate for each task authorized. Satisfactory completion of training shall be demonstrated by an examination or by workplace assessment. Task training and examination/assessment shall be carried out by the maintenance organization issuing the certifying staff authorization. The practical experience shall be also obtained within such maintenance organization.

145.36 Records of airworthiness review staff

The organization shall record all details concerning the airworthiness review staff and maintain a current list of all the airworthiness review staff together with their scope of approval as part of the organization's exposition pursuant to point 145.70(a)6.

The organization shall retain the record for at least three years after the staff referred to in this point have ceased employment (or engagement as a contractor or volunteer) with the organization or as soon as the authorization has been withdrawn. In addition, upon request, the maintenance organization shall provide the staff referred to in this point with a copy of their personal record on leaving the organization.

The staff referred to in this point shall be given access on request to their personal records.

145.40 Equipment, tools and material

- (a) The organization shall have available and use the necessary equipment, tools and material to perform the approved scope of work.

1. Where the manufacturer specifies a particular tool or equipment, the organization shall use that tool or equipment, unless the use of alternative tooling or equipment is agreed by CARC via procedures specified in the exposition.
 2. Equipment and tools must be permanently available, except in the case of any tool or equipment that is so infrequently used that its permanent availability is not necessary. Such cases shall be detailed in an exposition procedure.
 3. An organization approved for base maintenance shall have sufficient aircraft access equipment and inspection platforms/docking such that the aircraft can be properly inspected.
- (b) The organization shall ensure that all tools, equipment and particularly test equipment, as appropriate, are controlled and calibrated according to an officially recognized standard at a frequency to ensure serviceability and accuracy. Records of such calibrations and traceability to the standard used shall be kept by the organization.

145.42 Acceptance of components

- (a) All components shall be classified and appropriately segregated into the following categories:
1. Components which are in a satisfactory condition, released on a CARC Form 18-0227 or equivalent and marked in accordance with Subpart Q of Part-21.
 2. Unserviceable components which shall be maintained in accordance with this section.
 3. Unsalvageable components which are classified in accordance with point 145.42(d).
 4. Standard parts used on an aircraft, engine, propeller or other aircraft component when specified in the manufacturer's illustrated parts catalogue and/or the maintenance data.
 5. Material both raw and consumable used in the course of maintenance when the organization is satisfied that the material meets the required specification and has appropriate traceability. All material must be accompanied by documentation clearly relating to the particular material and containing a conformity to specification statement plus both the manufacturing and supplier source.
 6. Components referred to in point 21.307(c) of Part-21.
- (b) Prior to installation of a component, the organization shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive standards may be applicable.
- (c) The organization may fabricate a restricted range of parts to be used in the course of undergoing work within its own facilities provided procedures are identified in the exposition.
- (d) Components which have reached their certified life limit or contain a non-repairable defect shall be classified as unsalvageable and shall not be permitted to re-enter the component supply system unless certified life limits have been extended or a repair solution has been approved according to Part-21.

- (e) Components referred to in point 21.307(c) of Part-21 shall only be installed if considered eligible for installation by the aircraft owner in its own aircraft.

145.45 Maintenance data

- (a) The organization shall hold and use applicable current maintenance data in the performance of maintenance, including modifications and repairs. 'Applicable' means relevant to any aircraft, component or process specified in the organization's approval class rating schedule and in any associated capability list.

In the case of maintenance data provided by an operator or customer, the organization shall hold such data when the work is in progress, with the exception of the need to comply with point 145.55(c).

- (b) For the purposes of this Part, applicable maintenance data shall be any of the following:
1. Any applicable requirement, procedure, operational directive or information issued by the authority responsible for the oversight of the aircraft or component;
 2. Any applicable airworthiness directive issued by the authority responsible for the oversight of the aircraft or component;
 3. Instructions for continuing airworthiness, issued by type certificate holders, supplementary type certificate holders, any other organization required to publish such data by Part-21 and in the case of aircraft or components from foreign countries the airworthiness data mandated by the authority responsible for the oversight of the aircraft or component;
 4. Any applicable standard, such as but not limited to, maintenance standard practices recognized by CARC as a good standard for maintenance;
 5. Any applicable data issued in accordance with point (d).
- (c) The organization shall establish procedures to ensure that if found, any inaccurate, incomplete or ambiguous procedure, practice, information or maintenance instruction contained in the maintenance data used by maintenance personnel is recorded and notified to the author of the maintenance data.
- (d) The organization may only modify maintenance instructions in accordance with a procedure specified in the maintenance organization's exposition. With respect to those changes, the organization shall demonstrate that they result in equivalent or improved maintenance standards and shall inform the type-certificate holder of such changes. Maintenance instructions for the purposes of this point means instructions on how to carry out the particular maintenance task: they exclude the engineering design of repairs and modifications.
- (e) The organization shall provide a common work card or worksheet system to be used throughout relevant parts of the organization. In addition, the organization shall either transcribe accurately the maintenance data contained in points (b) and (d) onto such work cards or worksheets or make precise reference to the particular maintenance task or tasks contained in such maintenance data. Work cards and worksheets may be computer generated and held on an electronic database subject to both adequate safeguards against unauthorized alteration and a back-up electronic database which shall be updated within 24 hours of any entry made to the main electronic database. Complex maintenance tasks shall be transcribed onto the work cards or worksheets and

subdivided into clear stages to ensure a record of the accomplishment of the complete maintenance task.

Where the organization provides a maintenance service to an aircraft operator who requires their work card or worksheet system to be used then such work card or worksheet system may be used. In this case, the organization shall establish a procedure to ensure correct completion of the aircraft operators' work cards or worksheets.

- (f) The organization shall ensure that all applicable maintenance data is readily available for use when required by maintenance personnel.
- (g) The organization shall establish a procedure to ensure that maintenance data it controls is kept up to date. In the case of operator/customer controlled and provided maintenance data, the organization shall be able to show that either it has written confirmation from the operator/customer that all such maintenance data is up to date or it has work orders specifying the amendment status of the maintenance data to be used or it can show that it is on the operator/customer maintenance data amendment list.

145.47 Production planning

- (a) The organization shall have a system appropriate to the amount and complexity of work to plan the availability of all necessary personnel, tools, equipment, material, maintenance data and facilities in order to ensure the safe completion of the maintenance work.
- (b) The planning of maintenance tasks, and the organizing of shifts, shall take into account human performance limitations.
- (c) When it is required to hand over the continuation or completion of maintenance tasks for reasons of a shift or personnel changeover, relevant information shall be adequately communicated between outgoing and incoming personnel.

145.48 Performance of maintenance

The organization shall establish procedures to ensure that:

- (a) after completion of maintenance a general verification is carried out to ensure that the aircraft or component is clear of all tools, equipment and any extraneous parts or material, and that all access panels removed have been refitted;
- (b) an error capturing method is implemented after the performance of any critical maintenance task;
- (c) the risk of multiple errors during maintenance and the risk of errors being repeated in identical maintenance tasks are minimized; and,
- (d) damage including hidden damage is assessed and modifications and repairs are carried out using data specified in point M.304.

145.50 Certification of maintenance

- (a) A certificate of release to service shall be issued by appropriately authorized certifying staff on behalf of the organization when it has been verified that all maintenance ordered has been properly carried out by the organization in accordance with the

procedures specified in point 145.70, taking into account the availability and use of the maintenance data specified in point 145.45 and that there are no non-compliances which are known to endanger flight safety.

- (b) A certificate of release to service shall be issued before flight at the completion of any maintenance.
- (c) New defects or incomplete maintenance work orders identified during the above maintenance shall be brought to the attention of the aircraft operator for the specific purpose of obtaining agreement to rectify such defects or completing the missing elements of the maintenance work order. In the case where the aircraft operator declines to have such maintenance carried out under this point, point (e) is applicable.
- (d) A certificate of release to service shall be issued at the completion of any maintenance on a component whilst off the aircraft. The authorized release certificate 'CARC Form 18-0227' referred to in Appendix II of Part-M constitutes the component certificate of release to service except if otherwise specified in point M.502(b) or M.502(e). When an organization maintains a component for its own use, a CARC Form 18-0227 may not be necessary depending upon the organization's internal release procedures defined in the exposition.
- (e) By derogation to point (a), when the organization is unable to complete all maintenance ordered, it may issue a certificate of release to service within the approved aircraft limitations. The organization shall enter such fact in the aircraft certificate of release to service before the issue of such certificate.
- (f) By derogation to points (a) and 145.42, when an aircraft is grounded at a location other than the main line station or main maintenance base due to the non-availability of a component with the appropriate release certificate, it is permissible to temporarily fit a component without the appropriate release certificate for a maximum of 30 flight hours or until the aircraft first returns to the main line station or main maintenance base, whichever is the sooner, subject to the aircraft operator agreement and said component having a suitable release certificate but otherwise in compliance with all applicable maintenance and operational requirements. Such components shall be removed by the above prescribed time limit unless an appropriate release certificate has been obtained in the meantime under points (a) and 145.42.

145.55 Maintenance and airworthiness review records

- (a) The organization shall record all details of maintenance work carried out. As a minimum, the organization shall retain records necessary to prove that all requirements have been met for the issue of the certificate of release to service, including subcontractor's release documents, and for the issue of any airworthiness review certificate and recommendation.
- (b) The organization shall provide a copy of each certificate of release to service to the aircraft operator, together with a copy of any specific repair/modification data used for repairs/modifications carried out.
- (c) The organization shall retain a copy of all detailed maintenance records and any associated maintenance data for three years from the date the aircraft or component to which the work relates was released from the organization. In addition, it shall retain a copy of all the records related to the issue of airworthiness review certificates and

recommendations for three years from the date of issue and shall provide a copy of them to the owner of the aircraft.

1. The records under this point shall be stored in a manner that ensures protection from damage, alteration and theft.
 2. Computer backup discs, tapes etc. shall be stored in a different location from that containing the working discs, tapes etc., in an environment that ensures they remain in good condition.
 3. Where an organization approved under this Part terminates its operation, all retained maintenance records covering the last three years shall be distributed to the last owner or customer of the respective aircraft or component or shall be stored as specified by CARC.
- (d) Maintenance personnel should make entries in the maintenance records to indicate a description of the work performed including a reference to the approved data used. The maintenance record entries should provide enough information to demonstrate that compliance to the airworthiness requirements has been met. A maintenance release should be completed and signed to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data.
- (e) The implementation of an electronic maintenance release should consider the criteria referenced in AMC to Appendix II to Part M.

145.60 Occurrence reporting

- (a) The organization shall report to CARC, the state of registry and the organization responsible for the design of the aircraft or component any condition of the aircraft or component identified by the organization that has resulted or may result in an unsafe condition that hazards seriously the flight safety.
- (b) The organization shall establish an internal occurrence reporting system as detailed in the exposition to enable the collection and evaluation of such reports, including the assessment and extraction of those occurrences to be reported under point (a). This procedure shall identify adverse trends, corrective actions taken or to be taken by the organization to address deficiencies and include evaluation of all known relevant information relating to such occurrences and a method to circulate the information as necessary.
- (c) The organization shall make such reports in a form and manner established by CARC and ensure that they contain all pertinent information about the condition and evaluation results known to the organization.
- (d) Where the organization is contracted by a commercial operator to carry out maintenance, the organization shall also report to the operator any such condition affecting the operator's aircraft or component.
- (e) The organization shall produce and submit such reports as soon as practicable but in any case within 72 hours of the organization identifying the condition to which the report relates.

145.65 Safety and quality policy, maintenance procedures and quality system

- (a) The organization shall establish a safety and quality policy for the organization to be included in the exposition under point 145.70.
- (b) The organization shall establish procedures agreed by CARC taking into account human factors and human performance to ensure good maintenance practices and compliance with the applicable requirements established in 145.25 to 145.95. The procedures under this point shall:
 - 1. ensure that a clear work order or contract has been agreed between the organization and the organization requesting maintenance to clearly establish the maintenance to be carried out so that aircraft and components may be released to service in accordance with 145.50; and,
 - 2. cover all aspects of carrying out maintenance, including the provision and control of specialized services and lay down the standards to which the organization intends to work.
- (c) The organization shall establish a quality system that includes the following:
 - 1. Independent audits in order to monitor compliance with required aircraft/aircraft component standards and adequacy of the procedures to ensure that such procedures invoke good maintenance practices and airworthy aircraft/aircraft components. In the smallest organizations the independent audit part of the quality system may be contracted to another organization approved under this Part or a person with appropriate technical knowledge and proven satisfactory audit experience; and
 - 2. A quality feedback reporting system to the person or group of persons specified in point 145.30(b) and ultimately to the accountable manager that ensures proper and timely corrective action is taken in response to reports resulting from the independent audits established to meet point (1).

145.70 Maintenance organization exposition

- (a) 'Maintenance organization exposition' means the document or documents that contain the material specifying the scope of work deemed to constitute approval and showing how the organization intends to comply with this Part. The organization shall provide CARC with a maintenance organization exposition, containing the following information:
 - 1. A statement signed by the accountable manager confirming that the maintenance organization exposition and any referenced associated manuals define the organization's compliance with this Part and will be complied with at all times. When the accountable manager is not the chief executive officer of the organization then such chief executive officer shall countersign the statement;
 - 2. the organization's safety and quality policy as specified by point 145.65;
 - 3. the title(s) and name(s) of the persons nominated under point 145.30(b);

4. the duties and responsibilities of the persons nominated under point 145.30(b), including matters on which they may deal directly with CARC on behalf of the organization;
 5. an organization chart showing associated chains of responsibility between the persons nominated under point 145.30(b);
 6. a list of certifying staff, support staff and, if applicable, airworthiness review staff and staff responsible for the development and processing of the maintenance program, with their scope of approval;
 7. a general description of manpower resources;
 8. a general description of the facilities located at each address specified in the organization's approval certificate;
 9. a specification of the organization's scope of work relevant to the extent of approval;
 10. the notification procedure of point 145.85 for organization changes;
 11. the maintenance organization exposition amendment procedure;
 12. the procedures and quality system established by the organization under points 145.25 to 145.90 and any additional procedure followed in accordance with Part-M;
 13. a list of commercial operators, where applicable, to which the organization provides an aircraft maintenance service;
 14. a list of subcontracted organizations, where applicable, as specified in point 145.75(b);
 15. a list of line stations, where applicable, as specified in point 145.75(d);
 16. a list of contracted organizations, where applicable.
- (b) The exposition shall be amended as necessary to remain an up-to-date description of the organization. The exposition and any subsequent amendment shall be approved by CARC.
- (c) Notwithstanding point (b) minor amendments to the exposition may be approved through an exposition procedure (hereinafter called indirect approval).

145.75 Privileges of the organization

In accordance with the exposition, the organization shall be entitled to carry out the following tasks:

- (a) Maintain any aircraft and/or component for which it is approved at the locations identified in the approval certificate and in the exposition;
- (b) Arrange for maintenance of any aircraft or component for which it is approved at another organization that is working under the quality system of the organization. This refers to work being carried out by an organization not itself appropriately approved to carry out such maintenance under this Part and is limited to the work scope permitted under procedures laid down in point 145.65(b). This work scope shall not include a base maintenance check of an aircraft or a complete workshop maintenance check or overhaul of an engine or engine module;

- (c) Maintain any aircraft or any component for which it is approved at any location subject to the need for such maintenance arising either from the unserviceability of the aircraft or from the necessity of supporting occasional line maintenance, subject to the conditions specified in the exposition;
- (d) Maintain any aircraft and/or component for which it is approved at a location identified as a line maintenance location capable of supporting minor maintenance and only if the organization exposition both permits such activity and lists such locations;
- (e) Issue certificates of release to service in respect of completion of maintenance in accordance with point 145.50;
- (f) If specifically approved to do so for LA1 aircraft not involved in commercial operations,
 - 1. perform airworthiness reviews and issue the corresponding airworthiness review certificate, under the conditions specified in point M.901(l), and
 - 2. perform airworthiness reviews and issue the corresponding recommendation, under the conditions specified in point M.901(l) and M.904(a)2 and (b).
- (g) Develop the maintenance program and process its approval in accordance with point M.302 for LA2 aircraft not involved in commercial operations, under the conditions specified in point M.201(i)(3), and limited to the aircraft ratings listed in the approval certificate.

145.80 Limitations on the organization

The organization shall only maintain an aircraft or component for which it is approved when all the necessary facilities, equipment, tooling, material, maintenance data and certifying staff are available.

145.85 Changes to the organization

The organization shall notify CARC of any proposal to carry out any of the following changes before such changes take place to enable CARC to determine continued compliance with this Part and to amend, if necessary, the approval certificate, except that in the case of proposed changes in personnel not known to the management beforehand, these changes must be notified at the earliest opportunity:

- 1. the name of the organization;
- 2. the main location of the organization;
- 3. additional locations of the organization;
- 4. the accountable manager;
- 5. any of the persons nominated under point 145.30(b);
- 6. the facilities, equipment, tools, material, procedures, work scope, certifying staff or airworthiness review staff that could affect the approval.

145.90 Continued validity

- (a) An approval shall be issued for a 24-month duration. It shall remain valid subject to:
 - 1. the organization remaining in compliance with Part-145, in accordance with the provisions related to the handling of findings; and
 - 2. CARC being granted access to the organization to determine continued compliance with this Part; and
 - 3. the certificate not being surrendered or revoked.
- (b) Upon surrender or revocation, the approval certificate shall be returned to CARC.

145.95 Findings

- (a) A level 1 finding is any significant non-compliance with requirements laid down in this Part-145 which lowers the safety standard and hazards seriously the flight safety.
- (b) A level 2 finding is any non-compliance with requirements laid down in this Part-145 which could lower the safety standard and possibly hazard the flight safety.
- (c) After receipt of notification of findings, the holder of the maintenance organization approval shall define a corrective action plan and demonstrate corrective action to the satisfaction of CARC within a period agreed with CARC.

Appendices to Part-145

Appendix I — Authorized Release Certificate — CARC Form 18-0227

The provisions of Appendix II to Part-M apply.

Appendix II — Class and ratings system used for the approval of maintenance organizations referred to in Part-M Subpart F and Part-145

The provisions of Appendix IV to Part-M apply.

Appendix III — Maintenance organization approval referred to in Part-145**The Hashemite Kingdom Of Jordan
Civil Aviation Regulatory Commission****AMO Approval Certificate****Approval No.: CARC.AMO.xx**

Pursuant to the Civil Aviation Law No. (41) of 2007 as amended, and the Jordanian Civil Aviation Regulations (JCAR) Part 145 for the time being in force and subject to the conditions specified below, the Civil Aviation Regulatory Commission (CARC) hereby certifies;

Organization Name**Organization Address**

As a Part 145 Maintenance Organization approved to maintain the products, parts and appliances listed in the attached approval schedule and issue related certificates of release to service using the above approval number.

Conditions:

1. This approval is limited to that specified in the scope of approval section of the Part 145 approved maintenance organization exposition (MOE),
2. This approval requires compliance with the procedures specified in the Part 145 approved MOE,
3. This approval is valid whilst the approved maintenance organization remains in compliance with Part 145, and
4. Subject to compliance with the foregoing conditions, this approval shall remain valid until the expiry date, unless surrendered, superseded, suspended or revoked.

Date of First Issue:

Date of Re-issue:

Date of Expiry:

Chief Commissioner

Date of attached Approval Schedule:

Approval Schedule

Organization Name:

Approval No.:

Class	Rating	Limitation	Base	Line

This approval schedule is limited to those products and activities specified in the scope of approval section contained in the Part 145 approved maintenance organization exposition.

Reference: Maintenance Organization Exposition at latest amendment.

Date of issue:

Chief Commissioner

Appendix IV — Conditions for the use of staff not qualified in accordance with Part-66 referred to in points 145.30(j)1 and 2

Certifying staff in compliance with all the following conditions are deemed to meet the intent of point 145.30(j)(1) and (2):

- (a) The person shall hold a license or a certifying staff authorization issued under the national regulations in full compliance with ICAO Annex 1.
- (b) The scope of work of the person shall not exceed the scope of work defined by the national license or the certifying staff authorization, whatever is the most restrictive.
- (c) The person shall demonstrate he/she received the training on human factors and aviation legislation referred to in modules 9 and 10 of Appendix I to Part-66.
- (d) The person shall demonstrate 5 years maintenance experience for line maintenance certifying staff and 8 years for base maintenance certifying staff. However, those persons whose authorized tasks do not exceed those of a Part-66 category A certifying staff, need to demonstrate 3 years maintenance experience only.
- (e) Line maintenance certifying staff and base maintenance support staff shall demonstrate he/she received type training and passed examination at the category B1, B2 or B3 level, as applicable, referred to in Appendix III to Part-66 for each aircraft type in the scope of work referred to in point (b). Those persons whose scope of work does not exceed those of a category A certifying staff may however receive task training in lieu of a complete type training.
- (f) Base maintenance certifying staff shall demonstrate he/she received type training and passed examination at the category C level referred to in Appendix III to Part-66 for each aircraft type in the scope of work referred to in point (b), except that for the first aircraft type, training and examination shall be at the category B1, B2 or B3 level of Appendix III to part 66.