



## **AIRWORTHINESS NOTICE**

# **NOTICE 6501**

**Issue 1**

**15 April 2016**

### **MAINTENANCE ORGANISATION APPROVAL (DCAM PART 145)**

IN exercise of the powers conferred by regulations 31, 32, and 202 of the Civil Aviation Regulations 2016, the Director General makes this Airworthiness Notice ("Notice") – *Maintenance Organisation Approval (DCAM Part 145)*.

This Notice provides the requirement governing the organisation to engage in maintenance of aeronautical product.

This Notice is published by the Director General under section 240 of the Civil Aviation Act 1969 [Act 3] and come into operation on 15<sup>th</sup> April 2016.

#### **Non-compliance with this Notice**

Any person who contravenes any provision in this Notice commits an offence and shall on conviction be liable to the punishment under section 240 of the Civil Aviation Act 1969 [Act 3].

A handwritten signature in black ink, appearing to read 'Ghaedi' with a period at the end. The signature is written in a cursive style.

(Dato' Sri Azharuddin Abdul Rahman)  
Director General of Civil Aviation  
15<sup>th</sup> April 2016

**CIVIL AVIATION REGULATIONS 2016**  
**AIRWORTHINESS NOTICE – MAINTENANCE ORGANISATION APPROVAL**  
**(DCAM PART 145)**

**1.0 CITATION**

This Notice may be cited as the Airworthiness Notice – Maintenance Organisation Approval (DCAM Part 145) [**Notice 6501**].

**2.0 APPLICATION**

2.1 The following persons shall be subject to this Notice:

- (a) a maintenance organisation under regulation 31(1)(b) of the MCAR;  
and
- (b) a maintenance organisation under regulation 32 of the MCAR.

**3.0 INTERPRETATION**

In this Notice, unless the context otherwise requires:–

“certificate of release to service” means a document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organisation’s procedures manual or under an equivalent system. It includes certificate of release to service – schedule maintenance inspection and authorized release certificate;

“certifying staff” means personnel of a maintenance organisation under regulations 31 and 32 of MCAR who is responsible for the release of an aircraft or a component after maintenance;

“component” means any engine, propeller, part or appliance;

“human factors” means principles which apply to aeronautical design, certification, training, operations and maintenance and which seeks a 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;

“large aircraft” means an aircraft, classified as an aeroplane with a maximum certificated take-off mass exceeding 5,700 kg or an aeroplane

equipped with turbojet engine(s) or a helicopter with a maximum certificated take-off mass exceeding 3,175 kg or a helicopter with more than one engine;

“maintenance” means, in relation to an aircraft, the performance of tasks required to ensure the continuing airworthiness of the aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair;

“maintenance organisation exposition” means the document or documents that contain the material specifying the scope of work deemed to constitute approval and showing how the organisation intends to comply with this Notice; and

“MCAR” means Civil Aviation Regulations 2016.

#### **4.0 APPLICATION OF MAINTENANCE ORGANISATION APPROVAL**

- 4.1 An application for maintenance organisation approval shall be made to the Director General.
- 4.2 In the case of a maintenance organisation under regulation 31 of the MCAR, an applicant shall submit -
- (a) an application form DCA/AW/6501-01;
  - (b) a maintenance organisation exposition;
  - (c) DCAM Form 4 forms for each of the persons as specified in paragraph 7.2 of this Notice; and
  - (d) the applicable fee.
- 4.3 In the case of a maintenance organisation under regulation 32 of the MCAR, an applicant shall submit -
- (a) an application form DCA/AW/6501-01;
  - (b) a maintenance organisation exposition;
  - (c) DCAM Form 4 forms for each of the persons as specified in paragraph 7.2 of this Notice;
  - (d) evidence that the organisation is approved as a maintenance organisation by the local national aviation authority;
  - (e) evidence of need from local operator; and
  - (f) the applicable fee.
- 4.4 The application form shall be signed by the nominated accountable manager.

## **5.0 ISSUE OF MAINTENANCE ORGANISATION PROVISIONAL APPROVAL AND MAINTENANCE ORGANISATION APPROVAL FOR ORGANISATON LOCATED IN MALAYSIA**

- 5.1 An organisation may be entitled to have a provisional certificate of approval for maintenance organisation if:
- (a) the Director General is satisfied that their safety management system is in accordance with Notice 2101; and
  - (b) it complies with the applicable requirements under this Notice.
- 5.2 A provisional certificate of approval holder shall be entitled to perform maintenance activity in accordance with the conditions as specified in the certificate to demonstrate technical competency.
- 5.3 A provisional certificate of approval holder shall not be entitled to issue maintenance release.
- 5.4 An organisation who holds a provisional certificate of approval may be entitled to have a certificate of approval, for the organisation to engage in maintenance of aeronautical product, issued by the Director General if the Director General is satisfied that it has –
- (a) demonstrated technical competency; and
  - (b) fulfilled the applicable requirements under this Notice.
- 5.5 Provisional certificate of approval is terminated upon issuance of the certificate of approval.

## **6.0 ISSUE OF MAINTENANCE ORGANISATION APPROVAL FOR ORGANISATON LOCATED OUTSIDE MALAYSIA**

- 6.1 An organisation may be entitled to have a certificate of approval for maintenance organisation if:
- (a) the Director General is satisfied that their safety management system is established, and
  - (b) it complies with the applicable requirements under this Notice.

## **7.0 REQUIREMENTS**

### **7.1 Facility requirements (145.25)**

The organisation shall ensure that:

- (a) Facilities are provided appropriate for all planned work, ensuring in particular, protection from the weather elements. Specialised workshops and bays are segregated as appropriate, to ensure that environmental and work area contamination is unlikely to occur.
  - (i) For base maintenance of aircraft, aircraft hangars are both available and large enough to accommodate aircraft on planned base maintenance;
  - (ii) 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 of the certifying staff referred to in paragraph 7.1(a) of this Notice, 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:
  - (i) Temperatures must be maintained such that personnel can carry out required tasks without undue discomfort.
  - (ii) 'Lighting' is such as to ensure each inspection and maintenance task can be carried out in an effective manner.
  - (iii) 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.
  - (iv) 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.

- (v) 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.
- (vi) 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, rain, 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 authorised personnel.

## 7.2 Personnel requirements (145.30)

- (a) The organisation shall nominate an accountable manager, 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 Notice. The accountable manager shall:
  - (i) ensure that all necessary resources are available to accomplish maintenance in accordance with paragraph 7.12(b) of this Notice to support the organisation approval.
  - (ii) establish and promote the safety and quality policy specified in paragraph 7.12 of this Notice.
  - (iii) demonstrate a basic understanding of this Notice.
- (b) The organisation shall nominate a person or group of persons, whose responsibilities include ensuring that the organisation complies with this Notice. Such person(s) shall ultimately be responsible to the accountable manager.
  - (i) The person or persons nominated shall represent the maintenance management structure of the organisation and be responsible for all functions specified in this Notice.

- (ii) The person or persons nominated shall be identified and their credentials submitted in a form and manner established by the Director General.
  - (iii) 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 Notice.
  - (iv) Procedures shall make clear who deputises for any particular nominated person in the case of lengthy absence of the said nominated person.
- (c) The accountable manager under paragraph 7.2(a) of this Notice shall nominate a person, with responsibility for monitoring the quality system, including the associated feedback system as required by paragraph 7.12(c) of this Notice. The nominated person shall have direct access to the accountable manager to ensure that the accountable manager is kept properly informed on quality and compliance matters.

NOTES:

Persons nominated under paragraphs 7.2(a), 7.2(b) and 7.2(c) of this Notice shall be subjected to acceptance by Director General.

- (d) The organisation shall have a maintenance man-hour plan showing that the organisation has sufficient staff to plan, perform, supervise, inspect and quality monitor the organisation in accordance with the approval. In addition the organisation 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 organisation shall establish and control the competence of personnel involved in any maintenance, management and / or quality audits in accordance with a procedure and to a standard agreed by the Director General. 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 organisation.
- (f) The organisation 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 standard recognised by the Director General. Personnel who carry out any other specialised task shall be appropriately qualified in accordance with recognised Standards. By derogation to this paragraph, those personnel specified in paragraphs 7.2(g) and 7.2(h) of this Notice,

qualified in category B1 in accordance with Notice 1101, may carry out and/or control colour contrast dye penetrant tests.

- (g) Any organisation maintaining aircraft, except where stated otherwise in paragraph 7.2(j) of this Notice, shall in the case of aircraft line maintenance, have appropriate aircraft type rated certifying staff qualified as category B1 and category B2, as appropriate in accordance with Notice 1101 and paragraph 7.3 of this Notice.

In addition such organisations may also use appropriately task trained certifying staff qualified as category A and B2 in accordance with Notice 1101 and paragraph 7.3 of this Notice, to carry out minor scheduled line maintenance and simple defect rectification. The availability of such certifying staff shall not replace the need for Notice 1101 category B1 and category B2 certifying staff, as appropriate.

- (h) Any organisation maintaining aircraft, except where stated otherwise in paragraph 7.2(j) of this Notice, shall:

(i) In the case of base maintenance of large aircraft, have appropriate aircraft type rated certifying staff qualified as category B1 and category B2 in accordance with Notice 1101 and paragraph 7.3 of this Notice to certify the task for release to service in the appropriate categories and have appropriate certifying staff qualified as category C in accordance with Notice 1101 and paragraph 7.3 of this Notice, unless otherwise agreed by the Director General, for the issue of the base maintenance release. The organisation shall have sufficient aircraft type rated staff qualified as category B1, category B2 and category C as appropriate.

(1) category B1 and category B2 certifying 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 base maintenance release.

(2) The category C certifying staff shall ensure that compliance with paragraph 1 has been met and that all work required by the customer has been accomplished during the particular base maintenance check 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.



- (ii) In the case of base maintenance of aircraft other than large aircraft have either:
  - (1) appropriate aircraft type rated certifying staff qualified as Category B1 and category B2, as appropriate, in accordance with Notice 1101 and paragraph 7.3 of this Notice to certify the task for release to service in the appropriate categories and for the issue of base maintenance release, or
  - (2) appropriate aircraft rated certifying staff qualified in category C for the issue of the base maintenance release.
- (i) Component certifying staff shall have certifying staff authorised by company and qualified in accordance with the procedures approved by the Director General.
- (j) By derogations to paragraphs 7.2(g) and 7.2(h) of this Notice, in relation to the obligation to comply with the Notice 1101, the organisation may use certifying staff qualified in accordance with the following provisions:
  - (i) for organisation facilities located outside Malaysia certifying staff may be qualified in accordance with the national aviation regulations of the State in which the organisation facility is registered subject to the conditions specified in Appendix 1 to this Notice.
  - (ii) for line maintenance carried out at a line station of an organisation which is located outside the Malaysia, 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 1 to this Notice.
  - (iii) for a repetitive pre-flight airworthiness directive which specifically states that the flight crew may carry out such airworthiness directive, the organisation may issue a limited certification authorisation to the aircraft commander and/or the flight engineer on the basis of the flight crew licence held. However, the organisation 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.
  - (iv) in the case of aircraft operating away from a supported location the organisation may issue a limited certification authorisation to the commander and/or the flight engineer on the basis of the flight crew licence held subject to being satisfied that sufficient

practical training has been carried out to ensure that the commander or flight engineer can accomplish the specified task to the required standard. The provisions of this paragraph shall be detailed in an exposition procedure.

- (v) 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 organisation contracted to provide maintenance support may issue a one-off certification authorisation:
- (1) to one of its employees holding equivalent type authorisations on aircraft of similar technology, construction and systems; or
  - (2) to any person with not less than five years maintenance experience and holding a valid ICAO aircraft maintenance licence rated for the aircraft type requiring certification provided there is no organisation appropriately approved under this Notice at that location and the contracted organisation obtains and holds on file evidence of the experience and the licence of that person.

All such cases as specified in this paragraph must be reported to the Director General within seven days after issuing such certification authorisation. The organisation issuing the one-off authorisation shall ensure that any such maintenance that could affect flight safety is re-checked by an appropriately approved organisation. The organisation shall have an approved procedure in place for managing the maintenance activity undertaken at the location under the authority of the one-off authorisation.

### 7.3 Certifying staff

**(145.35)**

- (a) Any organisation maintaining aircraft and/or component, shall ensure that certifying staff have an adequate understanding of the relevant aircraft and/or components to be maintained together with the associated organisation procedures. In the case of certifying staff, this shall be accomplished before the issue or re-issue of a certification authorisation.

For the purpose of this paragraph—

- (i) 'Relevant aircraft and/or component' means those aircraft and component specified in the particular certification authorisation.

- (ii) 'Certification authorisation' means the authorisation issued to personnel by the organisation to specify the limitations of the certifying privileges.
- (b) Except those cases listed in paragraph 7.2(j) of this Notice, the organisation may only issue a certification authorisation to certifying staff in relation to the basic categories or sub-categories and any type rating listed on the aircraft maintenance license as required by Notice 1101, subject to the licence, remaining valid throughout the validity period of the authorisation and the certifying staff remaining in compliance with Notice 1101.
- (c) The organisation shall ensure that all certifying staffs are involved in at least 6 months of actual relevant aircraft or component maintenance experience in any consecutive 2 years period.

NOTE:

For the purpose of this paragraph '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 authorisation and/or has actually carried out maintenance on at least some of the aircraft type or aircraft group systems specified in the particular certification authorisation.

- (d) The organisation shall ensure that all certifying staff receive sufficient continuation training in each 2 years period to ensure that such staffs have up to date knowledge of relevant technology, organisation procedures and human factor issues.
- (e) The organisation shall establish a programme for the continuation training for certifying staff, including a procedure to ensure compliance with the relevant paragraph of 7.3 of this Notice as the basis for issuing certification authorisation and a procedure to ensure compliance with Notice 1101.
- (f) The organisation 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 the certification authorisation.
- (g) When the conditions of paragraphs 7.3(a), 7.3(b), 7.3(d), 7.3(f) of this Notice, and where applicable, paragraph 7.3(c) of this Notice, have been fulfilled by the certifying staff, the organisation shall issue a certification authorisation that clearly specifies the scope and limits of such authorisation. Continued validity of the certification authorisation is dependent upon continued compliance with paragraphs 7.3(a),

7.3(b), 7.3(d) of this Notice, and where applicable, paragraph 7.3(c) of this Notice.

- (h) The certification authorisation must be in a style that makes its scope clear to the certifying staff and any officer of the Director General who require to examine the authorisation. Where codes are used to define scope, the organisation shall make a code translation readily available.
- (i) The person responsible for the quality system shall also remain responsible on behalf of the organisation for issuing certification authorisation to certifying staff. Such person may nominate other persons to actually issue or revoke the certification authorisation in accordance with a procedure as specified in the exposition.
- (j) The organisation shall maintain a record of all certifying staff. The staff records shall contain:
  - (i) the details of any aircraft maintenance license held under Notice 1101,
  - (ii) all relevant training completed,
  - (iii) the scope of the certification authorisation issued, where relevant, and
  - (iv) particulars of staff with limited or one-off certification authorisation.

The organisation shall retain the record for at least three years after the certifying staff has ceased employment with the organisation or as soon as the authorisation has been withdrawn. In addition, upon request, the maintenance organisation shall furnish the staff referred in this paragraph with a copy of their record on leaving the organisation.

The certifying staff shall be given access on request to their personal records as detailed above.

- (k) The organisation shall provide certifying staff with a copy of their certification authorisation in either a documented or electronic format.
- (l) Certifying staff shall produce their certification authorisation to any officer of Director General upon request, within 24 hours.
- (m) The minimum age for certifying staff is 21 years.
- (n) The holder of a category A aircraft maintenance licence 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 organisation appropriately approved in accordance with this Notice or Notice 1201. This training shall include practical

hands on training and theoretical training as appropriate for each task authorised. Satisfactory completion of training shall be demonstrated by an examination or by workplace assessment carried out by the organisation.

- (o) The holder of a category B2 aircraft maintenance licence may only exercise the certification privilege describe in Notice 1101 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 authorisation that will be issued.

The task training shall include practical hands on training and theoretical training as appropriate for each task authorised. 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 organisation issuing the certifying staff authorisation. The practical experience shall be also obtained within such maintenance organisation.

#### **7.4 Equipment, tools and material (145.40)**

- (a) The organisation shall have available and use the necessary equipment, tools and material to perform the approved scope of work.
  - (i) Where the manufacturer specifies a particular tool or equipment, the organisation shall use that tool or equipment, unless the use of alternative tooling or equipment is agreed by the Director General. Request shall be made through procedures specified in the exposition.
  - (ii) 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.
  - (iii) An organisation approved for base maintenance shall have sufficient access equipment and inspection platforms / docking such that the aircraft can be properly inspected.
- (b) The organisation shall ensure that all tools, equipment and particularly test equipment, as appropriate, are controlled and calibrated according to a standard acceptable by the Director General, at a frequency to ensure serviceability and accuracy. Records of such calibrations and traceability to the standard used shall be kept by the organisation.

## 7.5 Acceptance of components

**(145.42)**

- (a) All components shall be classified and appropriately segregated into the following categories:
- (i) Components which are in a satisfactory condition, released on a DCAM Form 1 or DCA Authorised Release Certificate/ Airworthiness Approval Tag (DCA ARC) and marked accordingly.
  - (ii) Unserviceable components which shall be maintained in accordance with this Notice.
  - (iii) Unsalvageable components which are classified in accordance with paragraph 7.5(g) of this Notice.
  - (iv) 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.
  - (v) Material both raw and consumable used in the course of maintenance when the organisation 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.
- (b) Prior to installation of a component, the organisation shall ensure that the particular component is sourced from components classified in accordance with paragraph 7.5(a)(i) of this Notice.
- (c) By derogation to paragraph 7.5(b) of this Notice, component, other than engine and propeller, which are in a satisfactory condition, released on FAA Form 8130-3 or EASA Form 1, and marked accordingly, may be acceptable provided,
- (i) for FAA Form 8130-3 it is issued by the FAA approved repair station located in the United States of America;
  - (ii) for EASA Form 1 it is issued by EASA Part-145 organisation located in EASA member states; and
  - (iii) the FAA approved repair station or EASA Part-145 organisation issuing the maintenance release of component, has been appropriately evaluated and assessed as an approved supplier by the organisation.

- (d) In the case of, a new manufactured, overhauled, repaired, modified or inspected component is issued with a maintenance release by an original manufacturer the Director General is prepared to permit acceptance of such components subject to the organisation being under the control of the aircraft, engine or propeller Type Certificate holder and being authorised by the Certifying Authority for that particular purpose.
- (e) Prior to installation of a component, the organisation shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive standards may be applicable.
- (f) The organisation 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.
- (g) 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 by the Director General.

**7.6 Maintenance data (145.45)**

- (a) The organisation 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 organisation's approval class rating schedule and in any associated capability list.

In the case of maintenance data provided by an operator or customer, the organisation shall hold such data when the work is in progress, with the exception of the need to comply with paragraph 7.10(c) of this Notice.

- (b) For the purposes of this Notice, applicable maintenance data shall be any of the following:
  - (i) Any applicable requirement, procedure, operational directive or information issued by the authority responsible for the oversight of the aircraft or component.
  - (ii) Any applicable airworthiness directive issued by the authority responsible for the oversight of the aircraft or component;
  - (iii) Instructions for continuing airworthiness, issued by type certificate holders, supplementary type certificate holders, any other organisation required to publish such data by Director

General and in the case of aircraft or components from third countries the airworthiness data mandated by the authority responsible for the oversight of the aircraft or component;

- (iv) Any applicable standard, such as but not limited to, maintenance standard practices recognised by the Director General as a good standard for maintenance;
  - (v) Any applicable data issued in accordance with paragraph 7.6(d) of this Notice.
- (c) The organisation 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 organisation may only modify maintenance instructions in accordance with a procedure specified in the maintenance organisation's exposition. With respect to those changes, the organisation 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 paragraph means instructions on how to carry out the particular maintenance task: they exclude the engineering design of repairs and modifications.
- (e) The organisation shall provide a common work card or worksheet system to be used throughout relevant parts of the organisation. In addition, the organisation shall either transcribe accurately the maintenance data contained in paragraphs 7.6(b) and 7.6(d) of this Notice, on to such work cards or worksheets or make precise reference to the particular maintenance task or tasks contained in such maintenance data. Work cards or worksheets may be computer generated and held on an electronic database subject to both adequate safeguards against unauthorised alteration and a back-up electronic database which shall be up dated 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 organisation 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 organisation shall establish a procedure to ensure correct completion of the aircraft operators' work cards or worksheets.



- (f) The organisation shall ensure that all applicable maintenance data is readily available for use when required by maintenance personnel.
- (g) The organisation shall establish a procedure to ensure that maintenance data it controls or uses is kept up to date. In the case of operator/customer controlled and provided maintenance data, the organisation 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.

**7.7 Production planning (145.47)**

- (a) The organisation 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 organising of shifts, shall take into account human performance limitations.
- (c) When it is required to handover the continuation or completion of maintenance tasks for reasons of a shift or personnel change over, relevant information shall be adequately communicated between outgoing and incoming personnel.

**7.8 Performance of maintenance (145.48)**

The organisation 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 minimised; and,
- (d) damage is assessed and modifications and repairs are carried out using data specified in accordance with Notice 6101.

**7.9 Certification of maintenance (145.50)**

- (a) A maintenance release shall be issued by appropriately authorised certifying staff when it has been verified that all maintenance ordered has been properly carried out by the organisation in accordance with

the procedures specified in paragraph 7.13 of this Notice, taking into account the availability and use of the maintenance data specified in paragraph 7.6 of this Notice and that there is no non-compliance which are known to endanger flight safety.

- (b) A maintenance release shall be issued at the completion of any maintenance, before flight. A base maintenance release (BMR) is also required upon satisfactory completion of any scheduled base maintenance check.
- (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 paragraph, paragraph 7.9(e) of this Notice, is applicable.
- (d) A DCAM Form 1, which constitutes the component maintenance release, shall be issued at the completion of any maintenance on a component whilst off the aircraft. When an organisation maintains a component for its own use, a DCAM Form 1 may not be necessary depending upon the organisation's internal release procedures defined in the exposition.
- (e) By derogation to paragraph 7.9(a) of this Notice, when the organisation is unable to complete all maintenance ordered, it may issue a maintenance release within the approved aircraft limitations. The organisation shall enter such fact in the aircraft maintenance release before the issue of such release.
- (f) By derogation to paragraphs 7.9(a) and 7.5 of this Notice, 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 paragraph 7.9(a) or paragraph 7.5 of this Notice.

#### **7.10 Maintenance records (145.55)**

- (a) The organisation shall record all details of maintenance work carried out. As a minimum, the organisation shall retain records necessary to prove that all requirements have been met for the issue of the maintenance release, including subcontractor's release documents.
- (b) The organisation shall provide a copy of each maintenance release to the aircraft operator, together with a copy of any specific approved repair / modification data used for repairs / modifications carried out, upon completion of the maintenance.
- (c) The organisation shall retain a copy of all detailed maintenance records including any specific approved repair / modification data used for repairs / modifications carried out and any associated maintenance data for three years from the date the aircraft or component to which the work relates was released from the organisation.
  - (i) Records under this paragraph shall be stored in a manner that ensures protection from damage, alteration and theft.
  - (ii) 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.
  - (iii) Where an organisation approved under this Notice 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 the Director General.

#### **7.11 In-Service Difficulty Reporting (145.60)**

- (a) The organisation shall report to the Director General and the organisation responsible for the design of the aircraft or component, any condition of the aircraft or component identified by the organisation that has resulted or may result in an unsafe condition that hazards seriously the flight safety.
- (b) The organisation shall establish an internal reporting system as detailed in the exposition to enable the collection, evaluation and investigation of such reports, including the analysis, assessment and extraction of those occurrences to be reported under paragraph 7.11(a) of this Notice. This procedure shall identify adverse trends, corrective actions taken or to be taken by the organisation 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 organisation shall make such reports in accordance with Notice 8503 and ensures that they contain all pertinent information about the condition and evaluation results known to the organisation.
- (d) Where the organisation is contracted by a commercial operator to carry out maintenance, the organisation shall also report to the operator any such condition affecting the operator's aircraft or component.
- (e) The organisation shall produce and submit such reports as soon as practicable but in any case within 48 hours of the organisation identifying the condition to which the report relates.

**7.12 Safety and quality policy, maintenance procedures and quality system (145.65)**

- (a) The organisation shall establish a safety and quality policy for the organisation to be included in the exposition under paragraph 7.13 of this Notice.
- (b) The organisation shall establish procedures agreed by the Director General taking into account human factors and human performance to ensure good maintenance practices and compliance with the applicable requirements established in this Notice. The procedures under this paragraph shall:
  - (i) ensure that a clear work order or contract has been agreed between the organisation and the organisation requesting maintenance to clearly establish the maintenance to be carried out so that aircraft and components may be released to service in accordance with paragraph 7.9 of this Notice;
  - (ii) cover all aspects of carrying out maintenance, including the provision and control of specialised services and lay down the standards to which the organisation intends to work;
  - (iii) with regard to aircraft line and base maintenance, minimise the risk of multiple errors and capture errors on critical systems, and to ensure that no person is required to carry out and inspect in relation to a maintenance task involving some element of disassembly/reassembly of several components of the same type fitted to more than one system on the same aircraft during a particular maintenance check. However, when only one person is available to carry out these tasks then the organisation's work card or worksheet shall include an additional stage for re-inspection of the work by this person after completion of all the same tasks; and

- (iv) be established to ensure that damage is assessed and modifications and repairs are carried out using data specified in Notice 6101.
- (c) The organisation shall establish a quality system that includes the following:
  - (i) Independent audits in order to monitor :
    - (1) compliance with required aircraft / aircraft component standards; and
    - (2) adequacy of the procedures to ensure :
      - (I) that such procedures invoke good maintenance practices; and
      - (II) airworthy aircraft / aircraft components.

In the smallest organisations, the independent audit part of the quality system may be contracted to another organisation approved under this Notice or a person with appropriate technical knowledge and proven satisfactory audit experience.
  - (ii) A quality feedback reporting system to the person or group of persons specified in paragraph 7.2(b) of this Notice 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 paragraph 7.12(c)(i) of this Notice.

**7.13 Maintenance organisation exposition (145.70)**

- (a) The organisation shall provide the Director General with a maintenance organisation exposition, containing the following information:
  - (i) a statement signed by the accountable manager confirming that the maintenance organisation exposition and any referenced associated manuals define the organisation's compliance with this Notice and will be complied with at all times. When the accountable manager is not the chief executive officer of the organisation then such chief executive officer shall countersign the statement;
  - (ii) the organisation's safety and quality policy as specified by paragraph 7.12 of this Notice;
  - (iii) the title(s) and name(s) of the persons nominated under paragraph 7.2(b) of this Notice;

- (iv) the duties and responsibilities of the persons nominated under paragraph 7.2(b) of this Notice, including matters on which they may deal directly with the Director General on behalf of the organisation;
  - (v) an organisation chart showing associated chains of responsibility between the persons nominated under paragraph 7.2(b) of this Notice;
  - (vi) a list of certifying staff with their scope of approval;
  - (vii) a general description of manpower resources;
  - (viii) a general description of the facilities located at each address specified in the organisation's approval certificate;
  - (ix) a specification of the organisation's scope of work relevant to the extent of approval;
  - (x) the notification procedure of paragraph 9.1 of this Notice for organisation changes;
  - (xi) the maintenance organisation exposition amendment procedure;
  - (xii) the procedures and quality system established by the organisation under paragraphs 7.1 to 9.2 of this Notice and any additional procedure followed in accordance with Notice 6101;
  - (xiii) a list of commercial operators, where applicable, to which the organisation provides an aircraft maintenance service;
  - (xiv) a list of subcontracted organisations, where applicable, as specified in paragraph 8.1(b) of this Notice;
  - (xv) a list of line stations, where applicable, as specified in paragraph 8.1(d) of this Notice; and
  - (xvi) a list of contracted organisations, where applicable.
- (b) The exposition shall be amended as necessary to remain an up-to-date description of the organisation. The exposition and any subsequent amendment shall be approved by the Director General.
- (c) Notwithstanding paragraph 7.13(b) of this Notice, minor amendments to the exposition may be approved in accordance with the approved procedure in the exposition.

## **8.0 PRIVILEGES OF THE ORGANISATION (145.75)**

8.1 In accordance with the exposition, the organisation who holds certificate of approval 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 organisation that is working under the quality system of the organisation. This refers to work being carried out by an organisation not itself appropriately approved to carry out such maintenance under this Notice and is limited to the work scope permitted under procedures laid down in paragraph 7.12(b) of this Notice. 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 and/or 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 organisation exposition both permits such activity and lists such locations; and
- (e) Issue maintenance release in respect of completion of maintenance in accordance with paragraph 7.9 of this Notice.

## **8.2 Limitations on the organisation (145.80)**

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

## **9.0 CONTINUATION OF AN APPROVAL**

### **9.1 Changes to the organisation (145.85)**

The organisation shall notify the Director General of any proposal to carry out any of the following changes before such changes take place to enable the Director General to determine continued compliance with this Notice 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:

- (a) The name of the organisation;
- (b) The main location of the organisation;
- (c) Additional locations of the organisation;
- (d) The accountable manager;
- (e) Any of the persons nominated under paragraph 7.2(b) of this Notice;
- (f) The facilities, equipment, tools, material, procedures, workscope or certifying staff that could affect the approval.

**9.2 Continued validity (145.90)**

- (a) A provisional certificate of approval shall be valid for a period not exceeding 1 year and may not be renewed. Upon expiry, the application for maintenance organisation approval is terminated.
- (b) A certificate of approval shall be issued for a limited duration not exceeding 1 year.
- (c) Validity of provisional certificate of approval or certificate of approval is subject to the following conditions:
  - (i) The approval is limited to that specified in the provisional certificate of approval or certificate of approval;
  - (ii) The provisional certificate of approval or certificate of approval requires compliance with the procedures specified in the maintenance organisation exposition;
  - (iii) The organisation remaining in compliance with this Notice; and
  - (iv) The certificate not being surrendered, suspended or revoked.
- (d) An application to renew or vary of the approval shall be made to the Director General by submitting –
  - (i) application form DCA/AW/6501-1;
  - (ii) proposed revision of maintenance organisation exposition; and
  - (iii) applicable fee.
- (e) Upon revocation, the certificate shall be returned to the Director General.



### 9.3 Findings

**(145.95)**

- (a) A level 1 finding is any significant non-compliance with requirements laid down in this Notice which lowers the safety standard and hazards seriously the flight safety. The maintenance organisation approval shall cease to be in force immediately until acceptable corrective action has been taken by the organisation.
- (b) A level 2 finding is any non-compliance with requirements laid down in this Notice which could lower the safety standard and possibly hazard the flight safety. Failure to accomplish the corrective action to the satisfaction of Director General within 14 days after receipt of notification of findings, unless otherwise agreed, The maintenance organisation approval shall cease to be in force until acceptable corrective action has been taken by the organisation.
- (c) After receipt of notification of findings, the applicant or holder of the maintenance organisation approval shall define a preventive action and demonstrate the preventive action to the satisfaction of the Director General within 90 days unless otherwise agreed. The maintenance organisation approval shall be revoked, limited or suspended in whole or in part, depending upon the extent of the finding, until acceptable preventive action has been taken by the organisation.

### 10.0 CANCELLATION

This Notice cancels Airworthiness Notices No. 70 Issue 2 dated 1<sup>st</sup> October 2012, which should be destroyed.

## **APPENDIX 1      CONDITIONS FOR CERTIFYING STAFF NOT QUALIFIED IN ACCORDANCE WITH NOTICE 1101**

- 1.0 Certifying staff in compliance with the following conditions are deemed to meet the intent of paragraphs 7.2(j)(i) and 7.2(j)(ii) of this Notice:
- (a) The person shall hold a licence or a certifying staff authorisation 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 licence or certifying staff authorisation whichever is the most restrictive;
  - (c) The person shall demonstrate he/she has received training and been assessed on human factors;
  - (d) The person shall demonstrate five years maintenance experience for line maintenance certifying staff and eight years for base maintenance certifying staff. However, those person whose authorised tasks do not exceed those of a Notice 1101 category A certifying staff, need to demonstrate three years maintenance experience only.
  - (e) Line maintenance certifying staff and staff supporting category C certifying staff shall demonstrate he/she received type training approved by the national authority and passed examination conducted by the national authority at the category B1 or category B2 level, as applicable, referred to Notice 1101 for each aircraft type in the scope of work referred in paragraph 1.0(b) of this appendix. 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 approved by the national authority and passed examination conducted by the national authority at the category C level referred to Notice 1101 for each aircraft type in the scope of work referred in paragraph 1.0(b) of this appendix, except that for the first of type, training and examination shall be at the category B1 or category B2 level of Notice 1101.