IMPLEMENTING STANDARD 4

Civil Aviation (*Approved Maintenance Organisation*) Regulations 2007
Implementing Standards

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IMPLEMENTING STANDARD 4

Civil Aviation (*Approved Maintenance Organisation*) Regulations 2007

Standard NO: - 4.1 Approved Maintenance Organisation Certificate

Regulation 9 (1) (a)

Civil Aviation Department (Barbados)

APPROVED MAINTENANCE ORGANISATION CERTIFICATE

AMO No. _____

Pursuant to Regulation 8 of the Civil Aviation (Approved Maintenance Organisation) Regulations, 2007 as amended and subject to the conditions specified below, the Barbados Civil Aviation Department hereby certifies:

NAME OF AMO

as a Maintenance Organization approved to maintain the products listed in the attached Operations Specifications, and to issue related Certificates of Maintenance Review and Certificates of Release to Service using the above approval reference at the following location:

ADDRESS OF AMO

CONDITIONS

1. This approval is subject to the limitations as set out in the Operations Specifications.
2. Failure to comply with the procedures specified in the organisation's approved Repair Station Manual and Quality Manual renders this approval invalid.
3. Subject to compliance with the foregoing conditions, unless surrendered, suspended, or revoked this approval shall remain valid until midnight on the date of expiry indicated in **Ops Spec A001**.

Date of Issue: _____ / _____ / _____ .....

yyyy mm dd

Director of Civil Aviation

***Standard N: - 4.2 AMO* Operations Specifications**
Regulation 9 (3) (b)

1 The following ratings are issued under this regulation:

(a) ***Airframe ratings***. An aircraft rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications on an aircraft, including work on the powerplant(s) of that aircraft up to, but not including, overhaul as that term defined in the Civil Aviation (Airworthiness) Regulations 2007 under the following classes:

Class 1: Composite construction of small aircraft.

Class 2: Composite construction of large aircraft.

Class 3: All-metal construction of small aircraft.

Class 4: All-metal construction of large aircraft.

(b) ***Powerplant ratings***. A powerplant rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of powerplants under the following classes:

Class 1: Piston engines of 400 horsepower or less.

Class 2: Piston engines of more than 400 horsepower.

Class 3: Turbine engines.

(c***) Propeller ratings***. A propeller rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of propellers under the following classes:

Class 1: Fixed-pitch and ground-adjustable propellers of wood, metal or composite.

Class 2: Other propellers by make.

(d) ***Avionics/radio ratings.*** An avionics rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of avionics equipment under the following ratings:

Class 1: Communication equipment: Any radio transmitting equipment or receiving equipment, or both, used in aircraft to send or receive communications, regardless of carrier frequency or type of modulation used; including auxiliary and related aircraft interphone systems, amplifier systems, electrical or electronic intercrew signalling devices, and similar equipment; but not including equipment used for navigation of the aircraft or as an aid to navigation, equipment for measuring

altitude or terrain clearance, other measuring equipment operated on radio or radar principles, or mechanical, electrical, gyroscopic, or electronic instruments that are a part of communications avionics equipment.

Class 2: Navigational equipment: Any avionics system used in aircraft for en-route or approach navigation, except equipment operated on radar or pulsed radio frequency principles, but not including equipment for measuring altitude or terrain clearance or other distance equipment operated on pulsed radio frequency principles.

Class 3: Pulsed equipment: Any aircraft electronic system operated on pulsed radio frequency principles.

(e) ***Instrument ratings***. An instrument rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of instruments under the following classes:

Class 1: Mechanical: Any diaphragm, bourdon tube, aneroid, optical, or mechanically driven centrifugal instrument that is used on aircraft or to operate aircraft, including tachometers, airspeed indicators, pressure gauges, drift sights, magnetic compasses, altimeters, or similar mechanical instruments.

Class 2: Electrical: Any self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.

Class 3: Gyroscopic: Any instrument or system using gyroscopic principles and motivated by air pressure or electrical energy, including automatic pilot control units, turn and bank indicators, directional gyros, and their parts, and flux gate and gyrosyn compasses.

Class 4: Electronic: Any instruments whose operation depends on electron tubes, transistors, or similar devices including capacitance type quantity gauges, system amplifiers, and engine analysers.

(g) ***Accessory ratings***. An accessory rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of accessory equipment under the following classes:

Class 1: Mechanical. The accessories that depend on friction, hydraulics, mechanical linkage, or pneumatic pressure for operation, including aircraft brakes, mechanically driven pumps, carburettors, aircraft wheel assemblies, shock absorber struts and hydraulic servo units.

Class 2: Electrical. The accessories that depend on electrical energy for its operation, and a generator, including starters, voltage regulators,

electric motors, electrically driven fuel pumps magnetos, or similar electrical accessories.

Class 3: Electronic. The accessories that depend on the use of an electron tube transistors or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls.

STANDARD NO: - 4.3 **HOUSING AND FACILITIES REQUIREMENTS**
Regulation 17

An Approved Maintenance Organisation shall ensure that its housing and facilities, for the organisation under Regulation 17, meet the following minimum standards:

(a) for ongoing maintenance of aircraft, aircraft hangars shall be available and large enough to accommodate aircraft during maintenance activities;

(b) where the hangar is not owned by the Approved Maintenance Organisation, the Approved Maintenance Organisation should—

(i) establish proof of authorization to use hangar;

(ii) demonstrate sufficiency of hangar space to carry out planned base maintenance by preparing a projected aircraft hangar visit plan relative to the maintenance programme;

(iii) update the aircraft hangar visit plan on a regular basis;

(iv) ensure, for aircraft component maintenance, aircraft component workshops are large enough to accommodate the components on planned maintenance;

(v) ensure aircraft hangar and aircraft component workshop structures prevent the ingress of rain, hail, ice, snow, wind and dust, etc.;

(vi) ensure workshop floors are sealed to minimize dust generation; and

(vii) demonstrate access to hangar accommodation for usage during inclement weather for minor scheduled work and/or lengthy defect rectification;

(c) aircraft maintenance staff shall be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner;

(d) hangars used to house aircraft together with office accommodation shall be such as to ensure a clean, effective and comfortable working environment to include the following:

(i) temperatures should be maintained at a comfortable level;

(ii) dust and any other airborne contamination should be kept to a minimum and not permitted to reach a level in the work task area where visible aircraft/component surface contamination is evident;

(iii) lighting should be such as to ensure each inspection and maintenance task can be carried out; and

(iv) noise levels should not be permitted to rise to the point of distracting personnel from carrying out inspection tasks. Where it is impractical to control the noise source, such personnel should be provided with the necessary personal equipment to stop excessive noise causing distraction during inspection tasks;

(e) where a particular maintenance task requires the application of specific environmental conditions different from the foregoing, then such conditions shall be observed. (Specific conditions are identified in the approved maintenance instructions.)

(f) where the working environment for line maintenance deteriorates to an unacceptable level with respect to temperature, moisture, hail, ice, snow, wind, light, dust or other

airborne contamination; the particular maintenance or inspection tasks shall be suspended until satisfactory conditions are re-established

(g) for both base and line maintenance where dust or other airborne contamination results in visible surface contamination, all susceptible systems shall be sealed until acceptable conditions are re-established;

(h) storage facilities for serviceable aircraft components shall be clean, well ventilated and maintained at an even dry temperature to minimize the effects of condensation;

(i) standards and recommendations of the Manufacturer shall be followed for specific aircraft components;

(j) storage racks shall provide sufficient support for large aircraft components such that the component is not distorted; and

(k) all aircraft components, wherever practicable, shall remain packaged in protective material to minimize damage and corrosion during storage.

STANDARD NO: 4.4 **EQUIPMENT, TOOLS AND MATERIAL REQUIREMENTS**
Regulation 18

An Approved Maintenance Organisation shall ensure that the equipment, tools and material used in its organisation under Regulation 18, meet the following minimum standards:

(*a)* all applicable tools, equipment, and test equipment used for product acceptance and for making a finding of airworthiness shall be traceable to the applicable standards acceptable to the Director of Civil Aviation;

(b) except as provided in paragraph (1), in the case of foreign manufactured tools, equipment, and test equipment, the standard provided by the country of manufacture may be used if approved by the Director of Civil Aviation;

(c) where the manufacturer specifies a particular tool, equipment or test equipment, then such tool, equipment or test equipment shall be used unless the manufacturer has identified the use of an equivalent;

(d) except as provided in paragraph (3), tool, equipment, or test equipment other than that recommended by the manufacturer may be acceptable based on at least the following:

(i) the Approved Maintenance Organisation shall have a procedure in the Maintenance Procedures Manual if it intends to use equivalent tools, equipment or test equipment other than that recommended by the manufacturer;

(ii) the Approved Maintenance Organisation shall have a programme to include:

(A) a description of the procedures used to establish the competence of personnel that make the determination of equivalency to tools, equipment or test equipment;

(B) conducting and documenting the comparison made between the specification of the tool, equipment or test equipment recommended by the manufacturer and the equivalent tool, equipment or test equipment proposed;

(C) ensuring that the limitations, parameters, and reliability of the proposed tool, equipment or test equipment are equivalent to the manufacturer's recommended tools, equipment or test equipment; and

(D) ensuring that the equivalent tool, equipment or test equipment is capable of performing the appropriate maintenance function, all normal tests, or calibrations and checking all parameters of the aircraft or aeronautical product undergoing maintenance or calibration;

(iii) the Approved Maintenance Organisation shall have full control of the equivalent tool, equipment or test equipment such as through ownership or lease;

(e) an Approved Maintenance Organisation approved shall have sufficient aircraft access equipment and inspection platforms and docking equipment where applicable such that the aircraft may be properly inspected;

(f) the Approved Maintenance Organisation shall have a procedure to inspect and service and where appropriate, calibrate tools, equipment and test equipment on a regular basis and indicate to users that an item is within any inspection, service or calibration time limit;

(g) the Approved Maintenance Organisation shall have a procedure if it uses a primary, secondary or transfer standard for performing calibration and such standard shall not be used to perform maintenance;

(h) a clear system of labelling all tools, equipment and test equipment shall be used to give information on when the next inspection, service or calibration is due, and if the item is unserviceable for any other reason where it may not be obvious;

(i) a clear system of labelling all tools, equipment and test equipment shall be used to give information on when such tools, equipment and test equipment is not used for product acceptance and for making a finding of airworthiness;

(j) a register shall be maintained for all calibrated tools, equipment and test equipment together with a record of calibrations and standards used;

(k) inspection, service or calibration on a regular basis shall be in accordance with the equipment instructions of the manufacturer except where the Approved Maintenance Organisation can show by results that a different time period is appropriate in a particular case and is acceptable to the Director of Civil Aviation.

STANDARD NO: - 4.5 PERSONNEL AND TRAINING REQUIREMENTS
Regulation 20

1 Personnel Requirements

An Approved Maintenance Organisation shall ensure that in employing persons in its organisation under Regulation 20, it meets the following minimum standards:

(a) the Approved Maintenance Organisation functions shall be subdivided under individual managers or combined in any number of ways, dependent upon the size of the Approved Maintenance Organisation;

(b) the Approved Maintenance Organisation shall have, dependent upon the extent of approval, the following positions:

(i) a base maintenance manager;

(ii) a line maintenance manager;

(iii) a workshop manager; and

(iv) a quality manager

all of whom shall report the accountable manager.

Note: In small Approved Maintenance Organisations, one or more of the above positions may be combined subject to approval by the Director of Civil Aviation.

(c) the Accountable Manager shall be responsible for ensuring that all necessary resources are available to accomplish maintenance required to support the Approved Maintenance Organisation;

(d) the Base Maintenance Manager shall be responsible for—

(i) ensuring that all maintenance required to be carried out in the hangar, plus any defect rectification carried out during base maintenance, is carried out to specified design and quality standards; and

(ii) any corrective action resulting from quality compliance monitoring;

(e) the Line Maintenance Manager shall be responsible for—

(i) ensuring that all maintenance required to be carried out on the line, including line defect rectification, is performed to the required standards; and

(ii) any corrective action resulting from quality compliance monitoring;

(f) the Workshop Manager shall be responsible for—

(i) ensuring that all work on aircraft components is performed to required standards; and

(ii) any corrective action resulting from quality compliance monitoring;

(g) the Quality Manager shall be responsible for—

(i) monitoring compliance with the Barbados Civil Aviation Regulations by the Approved Maintenance Organisation; and

(ii) requesting remedial action as necessary by the base maintenance manager, line maintenance manager, workshop manager or the Accountable manager, as appropriate;

(h) the Approved Maintenance Organisation may adopt any title for managerial positions, but shall identify to the Director of Civil Aviation the titles and persons chosen to carry out these functions;

(i) where an Approved Maintenance Organisation chooses to appoint managers for all or any combination of the identified functions because of the size of the undertaking, these managers shall report ultimately through either the Base Maintenance Manager or Line Maintenance Manager or Workshop Manager or Quality Manager, as appropriate, to the Accountable manager;

(j) the managers specified in this subsection shall be identified and their credentials submitted to the Director of Civil Aviation to be accepted, such managers shall have relevant knowledge and satisfactory experience related to aircraft or aircraft component maintenance as appropriate in accordance with these Regulations;

Note: Certifying staff may report to any of the managers specified depending upon which type of control the Approved Maintenance Organisation uses (for example, licensed engineers, independent inspection or dual function supervisors, etc.) so long as the quality compliance monitoring staff remain independent.

(k) the Approved Maintenance Organisation shall have a production man-hours plan showing that it has sufficient man-hours for the intended work;

(l) if an Approved Maintenance Organisation is approved for base maintenance, the plan shall relate to the aircraft hangar visit plan;

(m) man-hour plans shall regularly be updated;

Note: Work performed on any aircraft registered outside Barbados should be taken into account where it impacts upon the production man-hours plan.

(n) quality monitoring compliance function man-hours shall be sufficient to meet the requirement of Regulation 21.(2);

(o) planners, mechanics, supervisors and certifying staff shall be assessed for competence by “on the job” evaluation or by examination relevant to their particular role within the Approved Maintenance Organisation before unsupervised work is permitted;

(p) to assist in the assessment of competence, job descriptions are recommended for each position. The assessment shall establish that—

(i) planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the aircraft maintenance programme;

(ii) mechanics are able to carry out maintenance tasks to any standard specified in the maintenance instructions and shall notify supervisors of mistakes requiring rectification to re-establish required maintenance standards;

(iii) supervisors are able to ensure that all required maintenance tasks are carried out and where not done or where it is evident that a particular maintenance task cannot be carried out to the maintenance instructions, then such problems shall be reported to and agreed by the quality organisation; and

(iv) certifying staff is able to determine when the aircraft or aircraft component is and is not ready to release to service;

(q) in the case of planners, supervisors, and certifying staff, knowledge of Approved Maintenance Organisation procedures relevant to their particular role shall be demonstrated;

(r) training of certifying staff shall be performed by the Approved Maintenance Organisation or by an institute selected by the Approved Maintenance Organisation. In either case, the Approved Maintenance Organisation shall establish the curriculum and standards for training, as well as prequalification standards for the personnel intended for training. Prequalification standards are intended to ensure that the trainee has a reasonable chance of successfully completing any course;

(s) examinations shall be set at the end of each training course;

(t) initial training shall cover—

(i) basic engineering theory relevant to the airframe structure and systems fitted to the class of aircraft the Approved Maintenance Organisation intends to maintain;

(ii) specific information on the actual aircraft type on which the person is intended to become a certifying person including the impact of repairs and system/structural defects; and

(iii) company procedures relevant to the certifying staff's tasks;

*(u) c*ontinuation training should cover changes in Approved Maintenance Organisation procedures and changes in the standard of aircraft and/or aeronautical products maintained;

(v) the training programme shall include details of the number of personnel who will receive initial training to qualify as certifying staff over specified time periods;

(w) the training programme established for maintenance personnel and certifying staff by the Approved Maintenance Organisation shall include training in knowledge and skills related to human performance including co-ordination with other maintenance personnel and flight crew;

2 **.Indoctrination, Initial, Recurrent, Specialised and Remedial Training**

(a) Each Approved Maintenance Organisation shall provide indoctrination training for employees that include at least 40 hours of instruction in at least the following subjects:

(i) Barbados Civil Aviation Regulations – particularly those associated with Approved Maintenance Organisation maintenance functions and authority as reflected on the certificate and operations specifications.

(ii) Company manuals, policies, procedures and practices, including quality control processes, particularly those associated with ensuring compliance with

maintenance (including inspection), preventive maintenance, and alteration procedures established to show compliance with Civil Aviation (Approved Maintenance Organisation) Regulations 2007;

(iii) Dangerous goods requirements.

(iv) Maintenance human factors – the elements should focus on aviation maintenance and safety related issues.

(v) Computer systems and software – as applicable to the repair station's maintenance (including inspection, preventive maintenance and alteration systems and procedures, and

(vi) Facility security - must include company security objectives, specific security procedures, employee responsibilities, actions to take in the event of a security breach, and the organisational security structure.

(b) Initial training. Each Approved Maintenance Organisation shall provide initial training for employees that include at least 80 hours of instruction in at least the following subjects consistent with the specific employee position and assigned job activities:

(i) General review;

(ii) Specific job or task training;

(iii) Shop safety;

(iv) Records and recordkeeping;

(v) Materials and parts;

(vi) Test equipment, including ground support equipment;

(vii) Tools;

(viii) Maintenance human factors, and

(ix) Any other items as required by the Director of Civil Aviation.

(c) Recurrent training. Each Approved Maintenance Organisation shall provide recurrent training for employees that include at least 8 hours of instruction in the subjects below:

(i) Refresher of subjects covered in initial training

(ii) New items introduced in the Approved Maintenance Organisation since completion of initial training;

(iii) Any other items required by the Director of Civil Aviation.

(d) Specialised training. Each Approved Maintenance Organisation shall provide specialised training, including initial and recurrent, for employees whose duties require a specific skill. Examples of specialised skills include: flame and/or plasma spray operations, special inspection or test techniques, special machining operations, complex welding operations, aircraft inspection techniques or complex assembly operations.

(e) Remedial training. Each Approved Maintenance Organisation shall provide remedial training to rectify an employee's demonstrated lack of knowledge or skill by providing

information as soon as possible. In some instances, remedial training may consist of an appropriately knowledgeable person reviewing procedures with an employee through on-the-job training. Remedial training should be designed to fix an immediate knowledge or skill deficiency and may focus on one individual. Successful remedial training should show an individual what occurred, why it occurred, and in a positive manner, how to prevent it from occurring again.

(f) Each Approved Maintenance Organisation, in developing training for employees, shall take into account the various training, experience, and skill levels of its employees as follows:

(i) Employees that hold an AME licence;

(ii) Employees with experience performing similar tasks at another Approved Maintenance Organisation;

(iii) Employees with applicable military aviation maintenance experience; and

(iv) Employees with no prior skills, experience, or knowledge.

(g) Each Approved Maintenance Organisation shall have procedures to determine the frequency of recurrent training and the need for specialised and remedial training.

(h) Each Approved Maintenance Organisation shall assess the competency of its employees for performing his or her assigned duties after completion of initial, recurrent, specialised and remedial training. This assessment of competency shall be appropriately documented in the employee's training records and shall be by done by any of the following methods, depending upon the size of the Approved Maintenance Organisation, its capabilities and experience of its employees:

(i) Written test.

(ii) Completion of a training course.

(iii) Skill test.

(iv) Group exercise.

(v) On the job assessment.

(vi) Oral examination in the working environment.

(i) in respect of understanding the application of human factors and human performance issues the following personnel are required to receive continuation training:

(i) nominated managers, managers and supervisors;

(ii) certifying staff, engineers, mechanics and technicians;

(iii) technical support staff—planners and technical records;

(iv) quality assurance and quality control staff;

(v) specialized services staff;

(vi) training instructors;

(vii) material procurement staff;

(viii) ground equipment staff; and

(ix) contract staff in the above categories.

Dangerous Goods Training Program

(a) An Approved Maintenance Organisation shall have a dangerous goods training program for its employees, whether full time, part time, or temporary or contracted, who are engaged in the following activities:

(i) Loading, unloading or handling of dangerous goods;

(ii) Design, manufacture, fabrication, inspection, marking, maintenance, reconditions, repairs or tests of a package, container or packaging component that is represented, marked, certified, or sold as qualified for use in transporting dangerous goods;

(iii) Preparation of hazardous materials for transport;

(iv) Responsible for the safety of transportation of dangerous goods;

(v) Operation of a vehicle used to transport dangerous goods, or

(vi) Supervision of any of the above listed items

(b) Dangerous goods training, at a minimum, shall include at least 8 hours instruction in at least the following:

(i) General awareness/familiarisation training —designed to provide familiarity with the requirements of this Part and these regulations and to enable the employee to recognise and identify dangerous goods.

(ii) Function-specific training —concerning the specific requirements of this Part and these regulations, or exemptions or special permits issued, relating to the specific functions the employee performs.

(iii) Safety training concerning—

(A) Emergency response.

(B) Measures to protect the employee from the hazards associated with the dangerous goods to which they may be exposed in the work place, including specific measures the employee has implemented to protect employees from exposure.

(C) Methods and procedures for avoiding accidents, such as the proper procedures for handling packages containing dangerous goods.

(iv) Security; awareness training —addressing the security risks associated with dangerous goods transportation and methods designed to enhance transportation security. This training must also include a component covering how to recognize and respond to possible security threats.

(v) In-depth security training ——must include company security objectives, specific security procedures, employee responsibilities, actions to take in the event of a security breach, and the organisational security structure.

(vi) Any other training required by the Director of Civil Aviation.

***STANDARD NO: - 4.6* RECORDS OF MANAGEMENT, SUPERVISORY, INSPECTION AND CERTIFYING STAFF**
Regulation 22

An Approved Maintenance Organisation shall ensure that records of certifying staff in the organisation under Regulation 22, meet the following minimum standards:

(a) the following minimum information shall be kept on record in respect of each certifying person:

(i) name;

(ii) date of birth;

(iii) basic training;

(iv) type training;

(v) continuation training;

(vi) experience;

(vii) qualifications relevant to the approval;

(viii) scope of the authorization;

(ix) date of first issue of the authorization;

(x) expiration date of the authorization (if appropriate); and

(xi) identification number of the authorization;

(b) records of certifying staff may be kept in any format and shall be controlled;

(c) the number of persons authorized to access the system shall be limited to minimize the possibility of records being altered in an unauthorized manner and to limit confidential records from becoming accessible to unauthorized persons;

(d) a certifying person shall be given reasonable access on request to his or her records;

(e) the Director of Civil Aviation is authorized to and may investigate the records system for initial and continued approval, or when the Director of Civil Aviation has cause to doubt the competence of a particular certifying person;

(f) the Approved Maintenance Organisation shall keep the record of a certifying person for at least two years after that person has ceased employment with the Approved Maintenance Organisation or upon withdrawal of his or her authorization. Upon request, the certifying staff shall be provided with a copy of their record on leaving the Approved Maintenance Organisation;

(g) the authorization document shall be in a style that makes its scope clear to certifying staff and any authorized person that may be required to examine the document. Where codes are used to define scope, an interpretation document shall be readily available; and
(h) certifying staff are not required to carry the authorization document at all times but shall produce it within a reasonable time of a request from an authorized person.

***STANDARD NO: 4.7* – CONTENTS MAINTENANCE PROCEDURES MANUAL**
Regulation 25 (4)

An Approved Maintenance Organisation shall ensure that its Maintenance Procedures Manual under Regulation 25 meets the following minimum standards:

(a) the Quality Manager shall be responsible for—

(i) monitoring the amendment of the Maintenance Procedures Manual, including associated procedures manuals; and

(ii) submitting proposed amendments to the Director of Civil Aviation, unless the Director of Civil Aviation has agreed, via a procedure stated in the amendment section of the Maintenance Procedures Manual, that some defined class of amendments may be incorporated without approval by the Director of Civil Aviation;

(b) the Maintenance Procedures Manual shall address at least five main areas:

(i) Management procedures covering the management and administration of the Maintenance Procedures Manual;

(ii) Maintenance procedures including line maintenance procedures.

(iii) Quality system procedures, including the methods of qualifying mechanics, inspection, certifying staff and quality audit personnel;

(iv) Documentation

and

(iv) Other;

(c) A Maintenance Procedures Manual shall contain the following subjects, which may be formatted in the manner shown hereunder in any subject order:

PART 1

MANAGEMENT

1.1 Corporate commitment by the Accountable manager;

1.2 Safety Policy;

1.3 Management personnel;

1.4 Duties and responsibilities of the management personnel;

1.5 Management Organisation Chart;

1.6 List of certifying staff;

1.7 Manpower resources;

1.8 General description of the facilities at each address intended to be approved;

1.9 Organisations intended scope of work;

1.10 Notification procedure to the Director of Civil Aviation regarding changes to the activities, approval, location and personnel of the organisation;

1.11 Manual amendment procedures.

PART 2

MAINTENANCE PROCEDURES

2.1 Supplier evaluation procedure;

2.2 Acceptance and inspection of aeronautical products and material from outside contractors;

2.3 Storage, tagging and release of aeronautical products and material to aircraft maintenance;

2.4 Acceptance of tools and equipment;

2.5 Calibration of tools and equipment;

2.6 Use of tooling and equipment including alternate tools by staff;

2.7 Cleanliness standards of maintenance facilities;

2.8 Maintenance instructions and relationship to the aeronautical product, instructions of the manufacturer including updating and availability to staff;

2.9 Repair procedure;

2.10 Aircraft maintenance programme compliance;

2.11 Airworthiness Directives procedure;

2.12 Optional modification procedure;

2.13 Maintenance documentation in use and completion of same;

2.14 Technical record control;

2.15 Rectification of defects arising during base maintenance;

2.16 Release to service procedure;

2.17 Records for the air operator;

2.18 Reporting of defects to the Director of Civil Aviation, Operator and the Manufacturer;

2.19 Return of defective aircraft components to store;

2.20 Defective components to outside contractors;

2.21 Control of computer maintenance record systems;

2.22 Reference to specific maintenance procedures such as—

(a) engine running procedures;

(b) aircraft pressure run procedures;

(c) aircraft towing procedures; and

(d) aircraft taxiing procedures.

PART L2

ADDITIONAL LINE MAINTENANCE PROCEDURES

L2.1 Line maintenance control of aircraft components, tools, equipment, etc.;

L2.2 Line maintenance procedures related to servicing/fuelling/de-icing, etc.;

L2.3 Line maintenance control of defects and repetitive defects;

L2.4 Line procedure for completion of technical log;

L2.5 Line procedure for pooled parts and loan parts;

L2.6 Line procedure for return of defective parts removed from aircraft.

PART 3
QUALITY SYSTEM PROCEDURES

3.1 Quality audit of organisation procedures;

3.2 Quality audit of aircraft;

3.3 Quality audit remedial action procedure;

3.4 Authorized Engineer qualification and training procedures;

3.5 Authorized Engineer records;

3.6 Quality audit personnel;

3.7 Qualifying inspectors;

3.8 Qualifying mechanics;

3.9 Exemption process control;

3.10 Concession control for deviation from organisations' procedures;

3.11 Qualification procedure for specialized activities such as non-destructive testing and welding; and

3.12 Control of working teams of the manufacturer.

PART 4

DOCUMENTATION

4.1 Contracted air operators;

4.2 Air operator procedures and paperwork;

4.3 Air operator record completion.

PART 5

EXAMPLES OF DOCUMENTS; LISTS

5.1 Sample of documents, such as technical record control or rectification of defects;

5.2 List of subcontractors;

5.3 List of line maintenance locations;

5.4 List of contracted organisations.

PART 6

OTHER SECTIONS AS THE DIRECTOR OF CIVIL AVIATION MAY APPROVE

Standard NO: 4.8. **A SYSTEM OF INSPECTIONS**
Regulation 26(1)(c)(i)

1. A system of inspection under Regulation 26(1)*(c)*(i) to ensure that all maintenance is properly performed shall be described in the Maintenance Procedures Manual and set out in the manner described in the example hereunder.

MAINTENANCE SYSTEM AND CERTIFYING STAFF

2. The minimum standards applicable to maintenance system and certifying staff shall be as follows:

(a) an Approved Maintenance Organisation shall appoint as head of the certifying staff, a nominated manager reporting to the accountable manager who will be responsible for ensuring full compliance by the Approved Maintenance Organisation, with all procedures outlined in this system as appropriate to any item being inspected, repaired, overhauled or modified by the Approved Maintenance Organisation. The airworthiness of those items and compliance and record requirements of the operators of those items and of the Approved Maintenance Organisation depend upon compliance with the procedures of this system;

(b) certifying staff shall—

(i) be thoroughly familiar with all inspection methods, techniques and equipment used in their area of responsibility to determine the quality of airworthiness of an article undergoing maintenance, repair or alterations;

(ii) maintain proficiency in the use of the various types of inspection aids to be used for inspection of the particular items undergoing inspection;

(iii) have readily available, all current specifications involving inspection tolerances, limits, and procedures as set forth by manufacturer of the product undergoing inspection and other forms of inspection information such as Civil Aviation Department airworthiness directives, manufacturer's bulletins, etc;

(iv) have readily available a current file of maintenance manuals, engineering letters, service letters, Civil Aviation Department regulations, etc., maintained in the inspection office;

(v) be familiar with the Civil Aviation regulations applicable to his areas of operations with particular emphasis on the following

(A) aircraft Registration and Marking;
(B) airworthiness;
(C) approved Maintenance Organisation;
(D) instruments and equipment;
(E) operations; and
(F) air Operator Certificate Certification and Administration;

(c) supervisors, certifying staff and mechanics shall be thoroughly familiar with the requirements of the Maintenance Procedures Manual, the Civil Aviation Regulations, airworthiness directives and advisory circulars, manufacturer’s
service letters and bulletins and engineering orders;

(d) mechanics shall be are required to sign their name for work performed prior to submitting the item to certifying staff for final acceptance; and

(e) certifying staff shall indicate his acceptance of work performed by the mechanic in (3) above by appending his signature and affixing his acceptance stamp next to the item on the work cards or work sheets.

MAINTENANCE CONTINUITY

3. (1) This section shall include the title of the person in the organisation who performs the maintenance continuity, the forms to be used and disposition of the record, reference to inspection standards of the manufacturer for the maintenance of the particular items and description of procedures for handling of—

(a) incoming materials including preliminary, hidden damage and final inspection where applicable;

(b) items as they progress through various stages of repair, overhaul or modification, including other inspections, test and calibrations such as Rockwell Hardness Test, Magnaflux, Ultrasonic X-ray, and adjusting or calibrating VOR, DME or ILS equipment; and

(c) the continuity of inspection and other maintenance from one shift or person to another.

(2) Continuity of Maintenance Responsibility shall be—

(a) established through a "Line of Succession" list maintained by the Approved Maintenance Organisation through procedures in the Maintenance Procedures Manual to clearly identify at all times, the nominated manager responsible for maintenance or the person acting on his behalf;

(b) maintained through the use of a status book which provided in each hangar and workshop in which a status report shall be left by each of the certifying staff leaving the job before completion of a project, for information to the succeeding certifying staff to ensure a continuing inspection responsibility for work inspections which are in progress;

(c) maintained by the use of forms designed to accommodate entries to indicate—

(i) work performed;

(ii) the name of the mechanic who performed or supervised the work;

and

(iii) the names of the certifying staff inspecting that work.

INCOMING MATERIALS

4. (1) This section shall explain—

(a) how compliance with airworthiness standards is shown;

(b) how inspections are recorded;

(c) how incoming materials are—

(i) classified;

(ii) inspected for damage;

(iii) preserved and assigned a shelf life;

(d) the identification of parts by part number;

(e) how their part number, batch number and location in the stock are recorded;

(f) the title of the person responsible for performing the inspection; and

(g) the action to be taken when materials received do not meet specifications.

(2) Parts receiving policy shall be established by the Approved Maintenance Organisation to ensure that—

(a) all incoming materials and other hardware, parts, components, equipment and other products procured for use by the maintenance organisation are subject to receiving inspection to assure conformance to part number, purchase order and other applicable specifications;

(b) a record of inspections in paragraph *(a)* shall be recorded on the Approved Maintenance Organisation Receiving Inspection Form by Form Number;

(c) products that fail to meet applicable specifications shall be tagged as unserviceable using a red tag listing the discrepancy and such tagged product returned to the vendor; and

(d) tagged products that fail to meet applicable specifications in paragraph *(c*) are to be placed in a locked holding area until they are removed for shipping to the vendor to ensure that they are not used in the performance of maintenance.

(3) The following general inspection and test requirements shall apply to new, repaired and overhauled components as applicable:

(a) new components manufactured under a type or production certificate, or in accordance with a Technical Standard Order or similar Director of Civil Aviation approved technical data, or components which have been rebuilt by the manufacturer to production specifications, require a visual receiving inspection;

(b) repaired or overhauled components received from an Approved Maintenance Organisation do not normally require more than a visual receiving inspection before being returned to service

(c) components that have been repaired or overhauled by other than an Approved Maintenance Organisation, shall, in addition to the normal receiving inspection, be functionally checked before being returned to stock;

(d) all components identified in paragraph *(c)*, requiring a functional check shall be routed to the proper facility for the accomplishment of this check;

(e) functional checks under paragraph *(c)* shall be performed in accordance with instructions contained in the appropriate publications of the manufacturer. Where such specific instructions are not available, functional check requirements may be determined by the Quality Manager, and issued on a form to provide a means of recording compliance therewith. Where suitable test facilities are not available at the Approved Maintenance Organisation, components may be functionally checked in the aircraft subject to the approval of the Director of Civil Aviation. In any case, all functional checks shall be monitored and recorded by the Quality Manager or his designated representative;

(f) the Quality Manager or certifying staff may request a functional check of any component overhauled or repaired by any agency, when of the opinion that such a check is required;

(g) all adhesives, sealers, primers, finishings and other materials having limited shelf life shall be identified by material control labels showing the expiration date of the shelf life as established by applicable specifications;

(h) where inspectors and mechanics identify items in paragraph *(g)* in the workshop or storerooms without such identification or with expired shelf life, they shall dispose those materials in accordance with approved procedures;

and

(i) the detailed functions of materials inspection are covered by the manufacturer's quality assurance directive and inspection bulletins, which shall be used to implement the operation of the Approved Maintenance Organisation with respect to the control and identification of materials, parts and equipment received for direct use in the Approved Maintenance Organisation. All new or overhauled parts purchased from vendors shall be checked for proper approval documentation prior to release for installation by the maintenance organisation.

WORK ORDER

5. This section shall describe the work order administration to ensure that receipt of a work request for maintenance or modification of aeronautical products or a product requiring a specialized service covered by the Operations Specifications of the Approved Maintenance Organisation Operations—

(a) the maintenance planning department shall issue a Work Order Number on a pre-numbered Work Order Form to authorize work to be accomplished;

(b) the Work Order Number under paragraph *(a)* shall be the basic reference for the maintenance record of the product maintained;

(c) the work order shall specify the work to be accomplished and shall be supplemented as necessary with detailed inspection instructions along with applicable forms to assure proper inspection and repair of the unit involved;

(d) the number of additional forms used shall be identified on the work order;

(e) the original of the printed and numbered work order form shall be secured and retained in a designated office;

(f) a logbook shall be maintained in the designated office for recording each work order in numerical order, identifying the customer, the product for which it was issued along with its serial number, special instructions and the work to be accomplished;

(g) it shall be the responsibility of the respective workshop manager to ensure that proper supplemental instructions are furnished to assure proper progressive servicing, inspection and testing of the product involved.

(h) mechanics shall enter work accomplished on the form and, sign the form for performing such work;

(i) certifying staff may use their signature or inspection stamp to sign off inspections of work performed by the mechanics where such work was performed in accordance with accepted standards;

(j) a copy of the work order with all attachments shall be filed as a permanent record of all work accomplished; and

(k) the record specified in paragraph *(j)* above shall—

(i) reflect the identity of each mechanic and certifying staff that performed maintenance and inspection on each unit;
(ii) show exactly what work was accomplished;
(iii) show all of the parts used; and
(iv) be maintained for a period of two years.

RECORD OF WORK

6. This section shall describe the minimum standards applicable to record of work performed shall include the following:

(a) a detailed record shall be kept of all work performed by the maintenance organisation;

(b) a copy of each Work Order Form with all attached supplementary forms shall be maintained in the Approved Maintenance Organisation records section;

(c) a separate file area shall be provided for all paper work associated with the Approved Maintenance Organisation's work activities;

(d) each work record shall be checked by an inspector for work accomplished, parts used signature of mechanic and inspectors who performed maintenance;

and

(e) records shall be maintained in active file for two (2) years.

PRELIMINARY INSPECTION

7. (1) This section shall provide information on—

(a) the procedures and methods to be followed when conducting such inspection;

(b) the persons authorized to conduct such inspection;

(c) any special testing requirements; and

(d) procedures in recording defects and the requirement of making them part of the work order.

(2) Preliminary inspection shall be conducted as follows:

(a) the nominated manager responsible for maintenance of the Approved Maintenance Organisation shall be responsible for the performance of appropriate inspections including functional and non-destructive tests to assure that all units delivered to the maintenance organisation for maintenance, modification or repair under the privileges of the Approved Maintenance Organisation certificate are subjected to a preliminary inspection to determine the state of preservation and any defects on the items involved;

(b) the inspection specified in paragraph *(a)* shall be recorded on a specific Preliminary Inspection Form with any discrepancies noted and the form must be attached to the work order identified with the unit involved;

(c) the Preliminary Inspection Form under paragraph *(b)* shall—

(i) show the work order number;

(ii) remain with the applicable inspection records until the unit is

released for functional or non-destructive tests;

(iii) be routed attached to the work order.

(d) prior to commencing work, the manager shall, in the case of work to be performed for an air operator under the continuous airworthiness requirements ensure that—

(i) all necessary current information and specifications are included or referred to in the work instructions that are to accompany the article through the Approved Maintenance Organisation; and

(ii) the work is performed in accordance with the manual of the air operator.

HIDDEN DAMAGE INSPECTION

8. This section shall describe—

(a) the title of the person in the organisation who is to perform the inspection;

(b) the depth of such inspection which shall include areas adjacent to obviously damaged members or components;

(c) how the inspection will be recorded;

(d) the recording and handling of any defects noted; and

(e) the requirement to make the inspection a part of the work order.

INSPECTION FOR HIDDEN DAMAGE

9. (1) This section shall explain how the results of required inspections are recorded and made part of the applicable work order and shall include instructions on the following:

(a) the preliminary inspection shall not be limited to the area of obvious damage or deterioration but include a thorough and searching inspection for hidden damage in areas adjacent to the damaged area;

(b) in the case of deterioration, a thorough review of all similar materials or equipment in a given system or structural area;

(c) the scope of this inspection shall be governed by the type of unit involved with special consideration accorded previous operating history, malfunction or defect reports, service bulletins and Airworthiness Directive notes applicable to the unit involved; and

(d) the person conducting such hidden damage inspection shall be responsible for listing all discrepancies noted during inspection on the work order prior to release for return to service.

(2) Certifying staff shall be assigned to make progressive inspections at various stages of teardown, overhaul, and repair of all units or components received by the maintenance organisation for service. Progressive inspections are accomplished with a frequency determined by applicable manual recommendations and work forms originated by the Approved Maintenance Organisation.

(3) Major repair and modification to aircraft and aeronautical products shall include the following:

(a) upon completion of the preliminary inspection, additional records may be prepared by the inspection department to provide a comprehensive historical record of the work performed;

(b) the records of work performed specified in paragraph *(a)* shall contain details, as applicable, of work orders, service bulletins, airworthiness directive notes, service letters, type of inspection, detailed figures related to functional tests and special non-destructive tests to be accomplished;

(c) the approved engineering or other approved technical data authorizing the repair or modification shall be clearly indicated. Where special drawings are made to cover specific repair conditions, a copy of the drawing shall be included with the aircraft records;

(d) units removed from the aircraft shall be tagged with the appropriate inspection identification tag listing the aircraft serial number, unit serial number and reason for removal; and

(e) units removed from the aircraft and tagged as specified in paragraph *(d)* shall not be reinstalled on the aircraft unless a visual inspection is conducted on such units and the unit is declared “serviceable” by an inspector.

(4) Self-contained accessory and appliance units such as actuators, pumps, valves, and generators, which, after preliminary inspection, have been established as eligible for overhaul or repair, shall be identified with a “Repairable Part” tag with appropriate repair instructions entered on the face of the tag, as authorized by the work order and shall not be approved for return to service without a maintenance release tag authorizing such return to service.

(5) Inspection Procedures shall include the following:

(a) the nominated manager responsible for Maintenance shall be responsible for the complete and efficient performance of inspections assigned to the Approved Maintenance Organisation to assure that inspections are carried out in accordance with manual specifications or other approved technical data;

(b) workshop supervisors shall be responsible for the accomplishment of all work in accordance with manual specifications or other approved technical data;

(c) the work by the Approved Maintenance Organisation under its Specialized Services rating for Non-destructive Inspection by X-ray, magnetic particle, eddy current or ultrasonic shall be accomplished in accordance with process specifications approved by the Director of Civil Aviation;

(d) modifications and repair shall be subject to progressive inspection by the certifying staff;

(e) discrepancies generated during the process of accomplishing the work involved shall be recorded on the appropriate work forms;

(f) discrepancies so recorded under paragraph *(e)*, shall be corrected before the unit is submitted for final inspection;

(g) upon completion of this progressive inspection, the area affected is given a detailed inspection and after all rework is accomplished and accepted, the inspector shall clear the unit for final acceptance;

(h) upon completion of a specific operation, the mechanic shall sign off the records using his signature indicating that the item is complete and ready for inspection;

(i) the actions performed to correct a specific discrepancy shall be noted under each item on the work order;

(j) the certifying staff shall then inspect the item to assure conformance to specifications and established workmanship standards;

(k) all systems affected by the work involved shall be subjected to functional checks before final acceptance for return to service; and

(l) inspection acceptance for return to service shall be indicated by the signature of the inspector and his certifying stamp.

(6) Maintenance inspection shall be accomplished in accordance with the following:

(a) one hundred hour and progressive inspections and aircraft continuous maintenance programmes shall be accomplished in accordance with the inspection cards or inspection schedule provided for each specific model aircraft;

(b) the inspection paperwork shall be supplemented as necessary to cover items to be replaced for time, special inspection items, discrepancies and airworthiness directives;

(c) all one hundred hour and annual inspection paperwork shall comply with the airworthiness requirements;

(d) no aircraft shall be returned to service following an inspection as outlined in paragraphs *(a)*, *(b)* and *(c)* until all discrepancies affecting airworthiness have been corrected;

(e) maintenance supervisors shall be responsible for screening completed work orders covering work performed in their assigned area to assure that all items on the work order have been cleared, that there are no open discrepancies and that all major work is accomplished in accordance with approved data;

(f) after work orders have been screened for completeness and accuracy, they shall be routed to the office of the applicable nominated manager; and

(g) such inspection and work records shall be retained in active file for a period of not less than two years.

HANDLING OF PARTS

10. (1) This section shall explain the method of compliance for processing of parts

and include the following:

(a) all items or components undergoing maintenance, repairs and modifications in the maintenance organisation shall have the component parts segregated and in containers in order to assure that all parts of the same unit are kept together;

(b) suitable trays, racks, stands and protective coverings where required shall be provided in workshop areas to ensure maximum protection of all parts;

(c) parts that fail to meet required standards shall be rejected and identified by the use of a red reject tag; and

(d) rejected parts specified in paragraph *(c)* shall be disposed of in accordance with acceptable methods established by the Approved Maintenance Organisation.

(2) Tagging and identification of parts may be accomplished using a “four-step” method as follows:

(a) a white identification tag shall be attached to the unit, showing details of the unit and of the customer;

(b) a yellow tag, processed by certifying staff only, shall be attached to units or parts requiring repairs or test and shall include work to be performed;

(c) a green tag with a Certificate of Release to Service printed or stamped thereon and signed by designated certifying staff only, shall be attached to units on which work has been completed and which have received final inspection for return to service;

(d) a red tag, shall be attached to rejected parts, pending final disposition. Where rejected parts are in large quantities, they may be placed in a special container marked "rejected parts" pending final disposition;

(e) all tags specified in paragraphs *(a)* to *(d)* shall contain the following information:

(i) name of manufacturer;

(ii) model;

(iii) part number;

(iv) serial number; and

(v) name of part owner;

(f) the yellow tag in paragraph *(c)* shall remain attached to the part returned to

the customer; and

(g) the white, green and red tags in paragraphs *(a)*, *(b)* and *(d)* respectively, shall form part of the work order file. Where a rejected part is returned to the customer, the red tag shall remain attached and a record made on the work order showing that the part was returned to the customer.

(3) Part finishing which includes painting and spraying shall be accomplished in an area segregated from the assembly areas.

(4) Preservation of parts shall be accomplished as follows:

(a) components shall be preserved in accordance with the recommendations of the manufacturer or other acceptable industry standards;

(b) to afford protection against humidity, extreme temperatures, dust, rough handling or other damage, components shall be preserved by wrapping in suitable containers, plastic bags or rigid boxes as applicable, containing suitable shock absorption material; and

(c) storage of preserved components by the Approved Maintenance Organisation shall be accomplished by storing at a separate location in the Approved Maintenance Organisation, maintained by the "Stores" department and shall provide maximum protection from physical damage.

(5) Shelf life of items shall be controlled as follows:

(a) for those items having a specific shelf life, the maintenance organisation shall ensure that the receiving inspector records such information on a specific form that shall allow

him to monitor the expiry dates so that items are removed from the shelf before their shelf life expires; and

(b) components of parts that have exceeded allowable shelf life limits shall be identified by a red tag and disposed of in an appropriate manner.

(6) Incoming material shall be controlled as follows:

(a) all incoming material shall be inspected for quantity, quality, conformity to dimensions or specifications and state of preservation; and

(b) where materials with an expiry date having shelf life are received, the expiry date shall be noted and a system shall be utilized whereby older stock are used first on a "first-in, first-out system" provided the specifications of the manufacturer are not exceeded.

(7) Hardware and equipment storage shall follow acceptable industry practices for the proper protection and storage of materials and ensure that only acceptable parts and supplies are issued for any job. The procedures for hardware and equipment storage shall include the following:

(a) the stockroom manager shall be responsible for the operation of the stockroom and controlling, segregating and maintaining all stock and tools;

(b) in addition the stockroom manager is required to—

(i) properly store, segregate and protect materials, parts and supplies;

(ii) provide suitable storage facilities for storing standard parts, spare parts and assure that raw materials are separated from workshop and working space;

(iii) provide for the preservation of all articles or parts, while in inventory, that are subject to deterioration and shelf life specifications.

RECORD OF TEST AND CALIBRATION

11. (1) This section shall include in-house tests applicable to the ratings of the Approved Maintenance Organisation and those contracted outside agencies. It shall include a requirement for the signature of the mechanic and certifying staff as appropriate and shall identify the article by serial number or company assigned number and include the following:

(a) procedures for recording specialized inspection, test and calibration shall be made on an appropriately printed work form with specific notations, attesting accomplishment, of the testing or calibration of the aeronautical product;

(b) where a record of the inspection by dimensions, tests or calibration is required by the technical data of the manufacturer, such record shall be made on an appropriate form properly identified with the Work Order date and signed by the mechanic performing the inspection, test or calibration, and the certifying staff as appropriate;

(c) a system shall be maintained on all precision test equipment that shall properly identify each piece of equipment. A filing system shall be maintained to properly identify

the equipment and record the date and person testing or calibrating each individual piece of precision equipment;

(d) where test and calibrations are performed by outside contractors such contractors shall be required to provide the records as outlined in paragraph *(b)* and *(c)*; and

(e) a list of outside contractors under paragraph *(d)* and the work for which they are contracted to perform for the Approved Maintenance Organisation shall be included in this section of the Maintenance Procedures Manual.

RECORD OF PRECISION TEST EQUIPMENT CALIBRATION

12. (1) This section shall identify the title of the person responsible for the calibration and the test of records. Such records shall include the name of the manufacturer, model and serial or company assigned number, date of check, the method used to calibrate and the frequency, the person or company who performs checks, and the results and any corrections made, when the next inspection is due and requirements to tag equipment.

(2) Procedures for the control of precision tools and test equipment shall include

the following:

(a) precision tools, gauges, scales, pressure gauges, ammeters, ohmmeters, voltmeters, radio, electronic, X-ray, eddy current and ultrasonic test equipment used in the operations of the Approved Maintenance Organisation shall be subject to periodic checks and calibration in accordance with appropriate Approved Maintenance Organisation procedures; and

(b) all Approved Maintenance Organisation personnel, before using test equipment, shall be responsible for checking that the testing unit has a current calibration label attached. Any piece of test equipment found in the Approved Maintenance Organisation without a current calibration label attached shall be routed to the appropriate department in the Approved Maintenance Organisation for re-calibration.

(3) Test equipment calibration shall include the following:

(a) test equipment shall be calibrated at periodic intervals established on the basis of stability, purpose and degree of usage. One year shall be the maximum calibration interval;

(b) each piece of test equipment shall be labelled. The label shall identify the unit by manufacturer, model and serial number. The attached label shall indicate the last calibration date and when the next calibration is due;

(c) during the first week of each month the nominated manager responsible for maintenance shall review the test equipment calibration history card file and give cards for test equipment requiring calibration to the maintenance manager and each workshop foreman as appropriate. It shall be the responsibility of those persons to issue work orders to maintenance organisation workshops or outside contractors as necessary for the

calibration of the units and attachment of updated calibration labels. After calibration, the test unit shall be checked for proper labelling and the equipment calibration history card shall be updated and returned to the inspection department active file;

(d) at no time shall any person be permitted to perform work on aircraft or components using test equipment, which is out of calibration. The test equipment labels shall be checked by supervisors at random to assure that equipment in use is in calibration. If at any time a piece of test equipment inadvertently exceeds its calibration due date, it shall immediately be removed from service until a calibration check has been performed; and

(e) standards used to calibrate test equipment shall be traceable to the Bureau of Standards or an approved standard of a foreign State by a certificate from the testing facility acceptable to the Director Of Civil Aviation. Frequency for calibration standards may vary for different units but shall never exceed a 12-month interval.

(4) Record of self-evaluations shall include the following:

(a) the title of the person responsible for performing the self-evaluations and the individual that ensures that the capability list is kept current. The record of self-evaluation shall include the title of the person, date, and the results and any corrections made as appropriate; and

(b) the self-evaluation along with the capability list shall be reviewed and signed by the accountable manager. Procedures identifying that the Approved Maintenance Organisation shall not perform such maintenance on any article until such time as the accountable manager has accepted and signed the self-evaluation sheet and capability list.

FINAL INSPECTION AND RELEASE TO SERVICE

13. (1) This section shall include procedures for compliance with the regulations, who performs the inspection, how such inspection is recorded and how the maintenance work package is checked for completion.

(2) Procedures for final inspection and release to service shall include the following:

(a) prior to approval for return to service, irrespective of the method to be used to indicate such approval, the nominated manager responsible for maintenance shall audit the records “package” as identified by the work order, to determine that all work has been inspected as required for compliance with this inspection system;

(b) when approval has been given to the above audit, either the nominated manager responsible for maintenance or the individual authorized in the official roster and individual summary of employment, shall approve the article for return to service;

(c) this approval shall be accomplished as appropriate to the work done, the article involved, the records available with the article, and the instructions of the customer;

(d) whenever the aircraft records are available, record of work accomplished is expected to be made therein;

(e) articles such as appliances, accessories, and individual parts or components shall not have an individual record to which an entry may be added. However, the installation of these items on an aircraft constitutes an aircraft maintenance or alteration, and records must be made accordingly;

(f) it shall be the responsibility of the certifying staff authorizing return to service to assure that the aircraft flight manual is properly revised following any modification to the aircraft and that the mass and balance record has been amended as necessary;

(g) aircraft components, appliances, and other items, other than completed aircraft repaired or overhauled as authorized by the maintenance organisation specifications, shall be returned to service through the use of a Certificate of Release to Service pre-printed on the serviceable parts tag described in this section of this manual. The authorized supervisor under whose jurisdiction the work is accomplished shall be responsible for the release of units in the category; and

(h) an aircraft or a unit shall not be released for return to service until the work order and other records have been reviewed for completeness and final acceptance for return to service cleared by inspection. Particular attention shall be accorded the status of applicable airworthiness directives.

(3) A Certificate of Release to Service stamp or pre-printed tag prepared in accordance with Civil Aviation (Airworthiness) Regulations, 2007, Regulation 34, shall be used to release to service major repairs which have been accomplished by this Approved Maintenance Organisation in accordance with Civil Aviation (Airworthiness) Regulations, 2007. Other records required by Civil Aviation (Airworthiness) Regulations, 2007 shall be executed as required regardless of whether a Certificate of Release to Service has been issued to return the article to service. In any event, the Approved Maintenance Organisation shall indicate on its copy of the work order whether or not a Certificate of Release to Service was issued. The following or similarly worded statement may be used:

"The aircraft, airframe, aircraft engine, propeller or appliance identified above was repaired and inspected in accordance with current maintenance rules of the Civil Aviation Regulations and is approved for return to service.

"Pertinent details of the repair are on file at this maintenance organisation under Work Order Number Date "

Signed

(Signature of authorized representative)

for

(Maintenance organisation name and certificate number)

(Address)"

MALFUNCTION OR DEFECT AND MECHANICAL RELIABILITY REPORT

14. (1) This section shall explain in detail how compliance with rules and reporting requirements are to be met and prescribe the responsibility by title, of persons who prepare and submit reports. The report requirements shall meet the following minimum standards as applicable:

(a) the Approved Maintenance Organisation shall report to the Director Of Civil Aviation within 72 hours after it discovers any serious defect in, or other recurring unairworthy condition of an aircraft, powerplant, propeller or any component of any of them;

(b) the report under paragraph (1) shall be made on a Malfunction or Defect Report form, describing the defect or malfunction completely without withholding any pertinent information;

(c) where the filing of a report under paragraph (2) might prejudice the Approved Maintenance Organisation, the Approved Maintenance Organisation should seek guidance from the Director of Civil Aviation on whether the serious defect or other recurring unairworthy condition under paragraph (1) shall be reported; and

(d) where the defect or malfunction could result in an imminent hazard to flight, the Approved Maintenance Organisation shall use the most expeditious method to inform the Director of Civil Aviation.

(2) Where the Approved Maintenance Organisation is accomplishing work for an air operator and a defect as described in the Malfunction or Defect Report under paragraph (1)*(a)* is found, the air operator shall be notified in order that the air operator may issue a Mechanical Reliability Report.

(3) Malfunction or Defect reports shall be prepared by the nominated manager responsible for maintenance and submitted to the Director of Civil Aviation through the Quality Manager and Accountable Manager.

SUBCONTRACTED MAINTENANCE PROCEDURES

15. (1) This section shall detail the procedures for the use of subcontracted maintenance and shall include the following:

(a) any work performed by another maintenance organisation for this Approved Maintenance Organisation shall be inspected by the nominated manager responsible for maintenance or certifying staff personnel delegated for such inspection;

(b) the inspection under subparagraph *(a)* shall be to verify that—

(i) the work was performed in accordance with prescribed standards;

(ii) parts and materials used met the required relevant airworthiness standards; and

(iii) the paperwork received with the material verifies the authenticity of the part and work performed;

(c) the stockroom manager of the Approved Maintenance Organisation shall not release any parts made by, or parts having had work performed on them by a subcontractor until the certifying staff personnel have approved the materials as being airworthy;

(d) all subcontracted work shall be segregated from regular stock until the inspection under paragraph *(a)* has been performed and the material accepted for use; and

(e) where subcontracted material is rejected as being unairworthy, it shall immediately be identified by tag as unairworthy and the proper disposition made, such as scrap or return to vendor.

(2) A list of the subcontracted services utilized by the Approved Maintenance Organisation such as the following as applicable shall be included:

(a) metal plating or anodizing;

(b) complex machine operations such as those involving the use of planers, shapers and, milling machines;

(c) abrasive air blasting and chemical cleaning operations;

(d) heat treatment;

(e) magnetic inspection;

(f) fabricate wood spars;

(g) overhaul and repair hydraulic-pneumatic shock absorber units;

(h) overhaul and repair hydraulic system components;

(i) fluorescent inspection of alloy parts; and

(j) recovering and refinishing of components and entire aircraft.

PERFORMANCE OF MAINTENANCE, PREVENTIVE MAINTENANCE, MODIFICATIONS AND REQUIRED INSPECTION UNDER THE CONTINUOUS AIRWORTHINESS REQUIREMENTS OF AN AIR OPERATOR

16. Where work is being performed by an Approved Maintenance Organisation for an air operator the following procedures shall be included in this section:

(a) the Approved Maintenance Organisation shall perform maintenance, preventive maintenance, modifications and required inspection under the continuous airworthiness requirements of the air operator in accordance with the manual of the air operator;

(b) the Approved Maintenance Organisation shall have a current copy of the applicable section of the manual of the air operator which contracts with the Approved Maintenance Organisation for the performance of the required maintenance of the air operator; and

(c) the nominated manager responsible for maintenance shall be responsible for keeping each manual of the air operator revised and determining that such manual is current before a work order is issued.

PERFORMANCE OF WORK AT A LOCATION OTHER THAN THE MAINTENANCE ORGANISATION

17. Where maintenance functions are being performed at a location other than at the Approved Maintenance Organisation the following procedures shall be included in this section:

(a) the Approved Maintenance Organisation shall indicate what maintenance service will be provided for its customers on an emergency on-call basis at a place away from the Approved Maintenance Organisation. Service shall only be provided for work for which the Approved Maintenance Organisation is rated;

(b) only the Accountable Manager or the nominated manager responsible for maintenance shall be authorized to initiate a work order for such work;

(c) the base maintenance manager shall be responsible for assigning the personnel necessary to perform the work and appoint a person to be in charge of the work force;

(d) the nominated manager responsible for maintenance shall assign the certifying staff responsible to inspect the work and ensure that all required forms and work are completed as necessary. The nominated manager responsible for maintenance shall assign one certifying staff personnel with the responsibility for returning the article to service;

(e) the base maintenance manager shall ensure that the article to undergo maintenance and the persons conducting the work shall be in an area safe for the work to be performed and that they shall be protected from the elements. The base maintenance manager shall be responsible for providing all the necessary manpower, work forms, technical data, tools, and equipment necessary for the accomplishment of the maintenance. The base maintenance manager shall establish a system of communications between the field force and the maintenance organisation;

(f) the stockroom manager shall be responsible for assigning a stockperson who shall provide parts and supply support between the maintenance organisation and the field force. All articles removed by the field force from a product undergoing maintenance at a location away from the maintenance organisation shall be routed through the stockroom parts receiving department. The article(s) shall be inspected in accordance with the maintenance organisation inspection procedures and either routed to the maintenance organisation workshops or to contract maintenance organisations, as appropriate; and

(g) personnel assigned to accomplish work away from the maintenance organisation shall accomplish the specific function of work in the same manner as when performed at the maintenance organisation.

STANDARD NO: 4.9 QUALITY ASSURANCE PROGRAMME AND MAINTENANCE PROCEDURES
Regulation 26

Quality System
An Approved Maintenance Organisation shall establish its quality system in accordance with the instructions contained in this standard.

1.0. General.
1.1 Terminology.
(a) The terms used in the context of the requirement for an Approved Maintenance Organisation's quality system have the following meaning:

(1) Accountable Manager. The person acceptable to the DCA who has corporate authority for ensuring that all maintenance activities can be financed and carried out to the standard required by the DCA, and any additional requirements defined by the Approved Maintenance Organisation.

(2) Quality assurance. Quality assurance, as distinguished from quality control, involves activities in the business, systems, and technical audit areas. A set of predetermined, systemic actions which are required to provide adequate confidence that a product or service satisfies quality requirements.

1.2 Quality Policy.

1.2.1 An Approved Maintenance Organisation shall establish a formal, written quality policy statement that is a commitment by the accountable manager as to what the quality system is intended to achieve. The quality policy should reflect the achievement and continued compliance with the Civil Aviation (Approved Maintenance Organisation) Regulations, 2007 together with any additional standards specified by the Approved Maintenance Organisation.

1.2.2 The accountable manager is an essential part of the Approved Maintenance Organisation management organisation. The term "accountable manager" is intended to mean the Chief Executive/President/Managing Director/ General Manager, etc. of the Approved Maintenance Organisation, who by virtue of his or her position has overall responsibility (including financial) for managing the organisation.

1.2.3 The accountable manager will have overall responsibility for the Approved Maintenance Organisation quality system, including the frequency, format and structure of the internal management evaluation activities as prescribed in paragraph 3.9 below.

1.3 Purpose of the Quality System.

1.3.1 The quality system should enable the Approved Maintenance Organisation to monitor compliance with the Civil Aviation (Approved Maintenance Organisation) Regulations, 2007, the Approved Maintenance Organisation's manual system, and any

other standards specified by the Approved Maintenance Organisation, or the DCA, to ensure safe operations and airworthy aircraft.

1.4 Quality Manager.

1.4.1 The function of the quality manager to monitor compliance with, and the adequacy of, procedures required to ensure safe operational practices and airworthy aircraft as required by these Civil Aviation Regulations, 2007 may be carried out by more than one person by means of different, but complementary, quality assurance programs.

1.4.2 The primary role of the quality manager is to verify, by monitoring activity in the field of, maintenance, that the standards required by the DCA, and any additional requirements defined by the Approved Maintenance Organisation, are being carried out under the supervision of the relevant required management personnel.

1.4.3 The quality manager should be responsible for ensuring that the quality assurance programme is properly established, implemented and maintained.

1.4.4 The quality manager should:

(a) Report to the accountable manager;

(b) Not be one of the required management personnel; and

(c) Have access to all parts of the Approved Maintenance Organisation's, and as necessary, any sub-contractor's organisation.

1.4.5 In the case of small/very small Approved Maintenance Organisation's, the posts of the Accountable Manager and quality manager may be combined.

2.0 Quality System.

2.1 Introduction.

2.1.1 The Approved Maintenance Organisation's quality system should ensure compliance with and adequacy of operational and maintenance activities requirements, standards, and procedures.

2.1.2 The Approved Maintenance Organisation should specify the basic structure of the quality system applicable to the operation.

2.1.3 The quality system should be structured according to the size and complexity of the organisation to be monitored.

2.2 Scope.

2.1.4 As a minimum, the quality system should address the following:

(a) The provisions of these Civil Aviation (Approved Maintenance Organisation) Regulations, 2007;

(b) The Approved Maintenance Organisation's additional standards and operating practices;

(c) The Approved Maintenance Organisation's quality policy;

(d) The Approved Maintenance Organisation's organisational structure;

(e) Responsibility for the development, establishment and management of the quality system;

(f) Documentation, including manuals, reports and records;

(g) Quality procedures;

(h) Quality assurance program;

(i) The required financial, material and human resources;

(j) Training requirements.

2.2.2 The quality system should include a feedback system to the accountable manager to ensure that corrective actions are both identified and promptly addressed. The feedback system should also specify who is required to rectify discrepancies and non-compliance in each particular case, and the procedure to be followed if corrective action is not completed within an appropriate timescale.

2.3 Relevant Documentation.

2.3.1 Relevant documentation includes the relevant part of the operator's manual system.

2.3.2 In addition, relevant document should include the following:

(a) Quality policy;

(b) Terminology;

(c) Specified maintenance standards;

(d) A description of the organisation;

(e) The allocation of duties and responsibilities;

(f) Operational procedures to ensure regulatory compliance;

(g) Accident prevention and flight safety programme;

(h) The quality assurance programme, reflecting:

- (i) Schedule of the monitoring process;
- (ii) Audit procedures;
- (iii) Reporting procedures;
- (iv) Follow-up and corrective action procedures;
- (v) Recording system;
- (vi) The training syllabus; and
- (vii) Document control

3.0 Quality assurance programme.

3.1 Introduction.

3.1.1 The quality assurance programme should include all planned and systematic actions necessary to provide confidence that all maintenance is conducted in accordance with all applicable requirements, standards and l procedures.

3.1.2 When establishing a quality assurance programme, consideration should be given to at least the following:

(a) Quality inspection;

(b) Audit;

(c) Auditors;

(d) Auditor's independence

(e) Audit scope;

(f) Audit scheduling;

(g) Monitoring and corrective action;

(h) Management evaluation.

3.2 Quality Inspection.

3.2.1 The primary purpose of a quality inspection is to observe a particular event/action/document, etc. in order to verify whether established procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved.

3.2.2 Typical subject areas for quality inspections are:

(1) Facilities size and segregation;
(2) Office accommodation
(3) Work environment
(4) Storage
(5) Management changes
(6) Staff numbers and man-hour plan
(7) Competence process
(8) Qualifying certifying staff;
(9) Records of certifying staff;
(10) Issue of authorizations
(11) Adequate equipment;
(12) Equipment control and calibration;
(13) Approved data held;
(14) Modified maintenance data;
(15) Data availability;

(16) Data up to date;
(17) Aircraft release;
(18) Release document contents;
(19) Release control
(20) Details on work documents;
(21) Operator's copy of release;
(22) Record retention;
(23) Reporting unairworthy findings;
(24) Clear work orders;
(25) Procedures per Maintenance Procedures Manual;
(26) Suppliers and subcontractors;
(27) Acceptance of parts;
(28) Parts control in stores;
(29) Use of tools;
(30) Cleanliness standards;
(31) Control of repairs;
(32) Aircraft Maintenance Programme completion;
(33) Airworthiness directive control;
(34) Control of modifications;
(35) Control of working documents;
(36) Base maintenance defects;
(37) Defective parts to stores;
(38) Parts to outside contractors;
(39) Computer maintenance systems;
(40) Engine running;
(41) Aircraft procedures;
(42) Line maintenance control parts;
(43) Line servicing control;
(44) Line defect control;
(45) Aircraft Technical Log – Maintenance Records section completion;
(46) Pool and loan parts;
(47) Return defective parts to base;
(48) Product maintenance exemption control;
(49) Procedures deviation control;
(50) Special services control (NDI);
(51) Contractors working teams;
(52) Product audit;
(53) Privileges and locations control;
(54) Limitation control;
(55) Control of changes.

3.2.3 Typical methods for quality inspections for maintenance include:

(a) Product sampling - the part inspection of a representative sample of the aircraft fleet;

(b) Defect sampling - the monitoring of defect rectification performance;

(c) Concession sampling - the monitoring of any concession to not carry out maintenance on time;

3.3 Audit.

3.3.1 An audit is a systematic, and independent comparison of the way in which an operation is being conducted against the way in which the published operational procedures say it should be conducted.

3.3.2 Audits should include at least the following quality procedures and processes:

(a) A statement explaining the scope of the audit;

(b) Planning and preparation;

(c) Gathering and recording evidence; and

(d) Analysis of the evidence.

3.3.3 Techniques that contribute to an effective audit are:

(a) Interviews or discussions with personnel;

(b) A review of published documents;

(c) The examination of an adequate sample of records;

(d) The witnessing of the activities that make up the operation; and

(e) The preservation of documents and the recording of observations.

3.4. Auditors.

3.4.1 An Approved Maintenance Organisation should decide, depending upon the complexity of the organisation, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team should have relevant maintenance experience.

3.4.2 The responsibilities of the auditors should be clearly defined in the relevant documentation.

3.5 Auditor's Independence.

3.5.1 Auditors should not have any day-to-day involvement in the area of the maintenance activity that is to be audited. An Approved Maintenance Organisation may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities by the use of part-time auditors. An Approved Maintenance Organisation whose structure and size does not justify the establishment of full-time auditors, may undertake the audit function by the use of part-time personnel from within its own organisation or from an external source under the terms of an agreement acceptable to the DCA. In all cases the Approved Maintenance Organisation should develop suitable procedures to ensure that

persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist is familiar with the type of operation and/or maintenance conducted by the operator.

3.5.2 The Approved Maintenance Organisation's quality assurance programme should identify the persons within the company who have the experience, responsibility and authority to:

(a) Perform quality inspections and audits as part of ongoing quality assurance;

(b) Identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings;

(c) Initiate or recommend solutions to concerns or findings through designated reporting channels;

(d) Verify the implementation of solutions within specific timescales;

(e) Report directly to the quality manager.

3.6 Audit Scope.

3.6.1 Approved Maintenance Organisation's are required to monitor compliance with the operational and maintenance procedures they have designed to ensure safe operations, airworthy aircraft and the serviceability of both operational and safety equipment. In doing so they should as a minimum, and where appropriate, monitor:

(a) Organisation;

(b) Plans and company objectives;

(c) Approved Maintenance Organisation certification (AMO/Operations specifications)

(d) Supervision;

(e) Manuals, logs, and records;

(f) Duty time limitations, rest requirements, and scheduling;

(g) Maintenance programmes and continued airworthiness;

(h) Airworthiness directives management;

(i) Maintenance accomplishment;

(j) Defect deferral;

(k) Dangerous goods;

(l) Security;

(m) Training.

3.7 Audit Scheduling.

3.7.1 A quality assurance program should include a defined audit schedule and a periodic review cycle area by area. The schedule should be flexible, and allow unscheduled audits when trends are identified. Follow-up audits should be scheduled when necessary to verify that corrective action was carried out and that it was effective.

3.7.2 An Approved Maintenance Organisation should establish a schedule of audits to be completed during a specified calendar period. All aspects of the operation should be reviewed within every 12 month period in accordance with the programme unless an extension to the audit period is accepted as explained below. An Approved Maintenance Organisation may increase the frequency of audits at its discretion but should not decrease the frequency without the agreement of the DCA. Audit frequency should not be decreased beyond a 24 month period interval.

3.7.3 When an Approved Maintenance Organisation defines the audit schedule, significant changes to the management, organisation, operation, or technologies should be considered as well as changes to the regulatory requirements.

3.8 Monitoring and Corrective Action.

3.8.1 The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby to ensure that defined policy and maintenance standards are continuously complied with. Monitoring activity is based upon quality inspections, audits, corrective action and follow-up. The Approved Maintenance Organisation should establish and publish a quality procedure to monitor regulatory compliance on a continuing basis. This monitoring activity should be aimed at eliminating the causes of unsatisfactory performance.

3.8.2. Any non-compliance identified as a result of monitoring should be communicated to the manager responsible for taking corrective action or, if appropriate, the accountable manager. Such non-compliance should be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.

3.8.3 The quality assurance programme should include procedures to ensure that corrective actions are taken in response to findings. These quality procedures should monitor such actions to verify their effectiveness and that they have been completed. Organisational responsibility and accountability for the implementation of corrective action resides with the department cited in the report identifying the finding. The accountable manager will have the ultimate responsibility for resourcing the corrective active action and ensuring, through the quality manager, that the corrective action has re-established compliance with the standard required by the DCA, and any additional requirements defined by the operator.

3.8.4 Corrective action. Subsequent to the quality inspection/audit, the Approved Maintenance Organisation should establish:

(a) The seriousness of any findings and any need for immediate corrective action;

(b) The origin of the finding;

(c) What corrective actions are required to ensure that the non-compliance does not recur;

(d) A schedule for corrective action;

(e) The identification of individuals or departments responsible for implementing corrective action;

(f) Allocation of resources by the accountable manager, where appropriate.

3.8.5 The quality manager should:

(a) Verify that corrective action is taken by the manager responsible in response to any finding of non-compliance;

(b) Verify the corrective action includes the elements outlined in paragraph 3.8.4 above;

(c) Monitor the implementation and completion of corrective action'

(d) Provide management with an independent assessment of corrective action; implementation and completion;

(e) Evaluate the effectiveness of corrective action through follow-up process.

3.9 Management Evaluation.

3.9.1 A management evaluation is a comprehensive, systematic, documented review by the management of the quality system, policies and procedures, and should consider:

(a) The results of quality inspections, audits and any other indicators;

(b) The overall effectiveness of the management organisation in achieving stated objectives.

3.9.2 A management should identify and correct trends, and prevent, where possible, future non-conformities. Conclusions and recommendations made as a result of an evaluation should be submitted in writing to the responsible manager for action. The responsible manager should be an individual who has the authority to resolve issues and take action.

3.9.3 The accountable manager should decide upon the frequency, format and structure of internal management evaluation activities.

3.10 Recording.

3.10.1 Accurate, complete and readily accessible records documenting the results of the quality assurance programme should be maintained by the Approved Maintenance Organisation. Records are essential data to enable an operator to analyse and determine the root causes of non-conformity, so that areas of non-compliance can be identified and addressed.

3.10.2 The following records should be retained for a period of 5 years:

(a) Audit schedules;

(b) Quality inspection and audit reports;

(c) Responses to findings;

(d) Corrective action reports;

(e) Follow-up and closure reports; and

(f) Management evaluation reports.

4.0 Quality Assurance Responsibility for Sub-Contractors.

4.1 Sub-Contractors.

4.1.1 Approved Maintenance Organisation's may decide to sub-contract out certain activities to external agencies for the provision of services related to areas such as:

(a) Maintenance;

(b) Training;

(c) Manual preparation.

4.1.2 The ultimate responsibility for the product or service provided by the sub-contractor always remains with the Approved Maintenance Organisation. A written agreement should exist between the Approved Maintenance Organisation and the sub-contractor clearly defining the safety related services and quality to be provided. The sub-contractor's safety related activities relevant to the agreement should be included in the Approved Maintenance Organisation's quality assurance programme.

4.1.3 The Approved Maintenance Organisation should ensure that the sub-contractor has the necessary authorisation/approval when required and commands the resources and competence to undertake the task.

5.0. Quality System Training.

5.1 General.

5.1.1 An Approved Maintenance Organisation should establish effective, well planned and resourced quality related briefing for all personnel.

5.1.2 Those responsible for managing the quality system should receive training covering:

(a) An introduction to the concept of the quality system;

(b) Quality management;

(c) The concept of quality assurance;

(d) Quality manuals;

(e) Audit techniques;

(f) Reporting and recording; and

(g) The way in which the quality system will function in the company.

5.1.3 Time should be provided to train every individual involved in quality management and for briefing the remainder of the employees. The allocation of time and resources should be governed by the size and complexity of the Approved Maintenance Organisation.

5.2 Sources of Training.

5.2.1 Quality management courses are available from the various International Institutions, and an Approved Maintenance Organisation should consider whether to offer such courses to those likely to be involved in the management of quality systems. Approved Maintenance Organisation's with sufficient appropriately qualified staff should consider whether to carry out in-house training.

6.0 Organisations with 20 or Less Full-Time Employees.

6.1 Introduction.

6.1.1 The requirement to establish and document a quality system, and to employ a quality manager applies to all Approved Maintenance Organisation's. References to large and small operators elsewhere in these Implementing Standards are governed by aircraft capacity (i.e. more or less than 20 seats) and by mass (i.e. greater or less than 10 tonnes maximum take-off mass). Such terminology is not relevant when considering the scale of an operation and the quality system required. In the context of quality systems therefore, operators should be categorised according to the number of full time staff employees.

6.2 Scale of Operation.

6.2.1 Approved Maintenance Organisation's who employ 5 or less full time staff are considered to be "very small" while those employing between 6 and 20 full time employees are regarded as "small" operators as far as quality systems are concerned. Full-time in this context means employed for not less than 35 hours per week excluding vacation periods.

6.2.2 Complex quality systems could be inappropriate for small or very small operators and the clerical effort required to draw up manuals and quality procedures for a complex system may stretch their resources. It is therefore accepted that such operators should tailor their quality systems to suit the size and complexity of their operation and allocate resources accordingly.

6.3 Quality System for Small/Very Small Approved Maintenance Organisation's.

6.3.1 For small and very small Approved Maintenance Organisation's it may be appropriate to develop a quality assurance programme that employs a checklist. The checklist should have a supporting schedule that requires completion of all checklist items within a specified timescale, together with a statement acknowledging completion of a periodic review by top management. An occasional independent overview of the checklist content and achievement of the quality assurance should be undertaken.

6.3.2 The "small" Approved Maintenance Organisation may decide to use internal or external auditors or a combination of the two. In these circumstances it would be acceptable for external specialists and or qualified organisations to perform the quality audits on behalf of the quality manager.

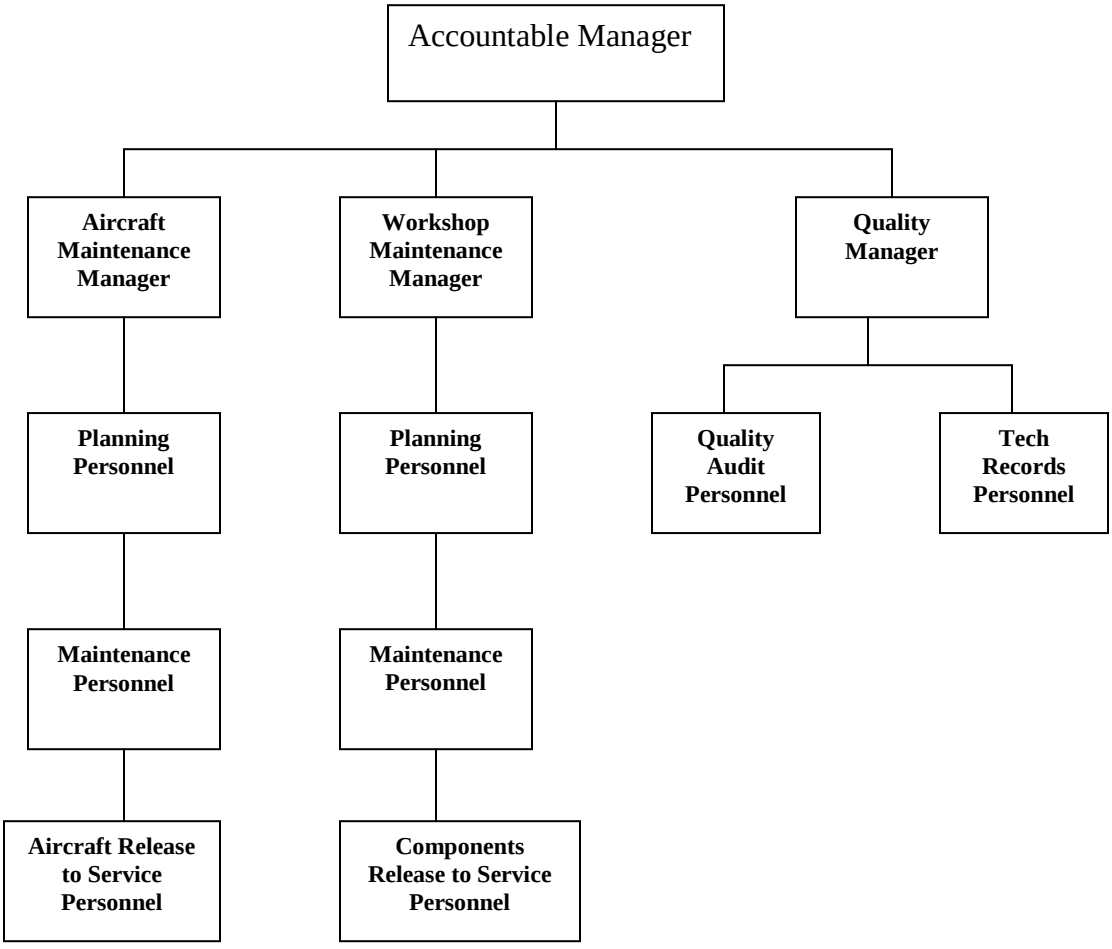
6.3.3 If the independent quality audit function is being conducted by external auditors, the audit schedule should be shown in the relevant documentation.

6.3.4 Whatever arrangements are made, the operator retains the ultimate responsibility for the quality system and especially the completion and follow-up of corrective actions.

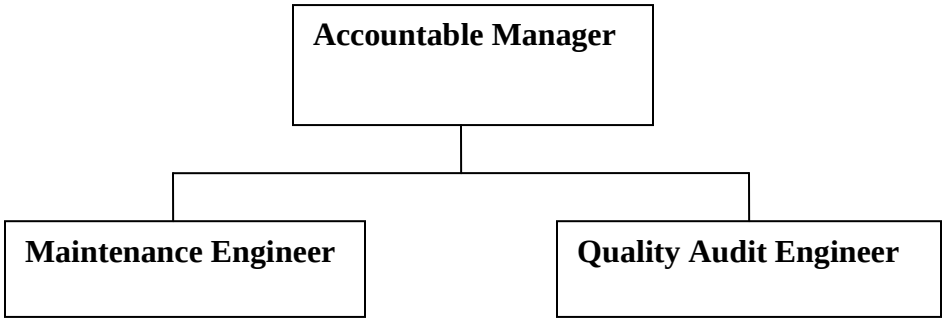
Quality System – Organisation Examples

(a) The following diagrams illustrate two typical examples of Approved Maintenance Organisation Quality organisations.

(1) A typical large Approved Maintenance Organisation.



(2) A typical small Approved Maintenance Organisation.



***Standard NO*: - 4.10 CERTIFICATE OF RELEASE TO SERVICE**
Regulation 30

A Certificate of Release to Service under Regulation 30 shall meet the following minimum standards:

(a) a Certificate of Release to service is required for the following:

(i) before flight at the completion of any package of maintenance scheduled by the approved aircraft maintenance programme on the aircraft, whether such maintenance took place as base or line maintenance;

(ii) before flight at the completion of any defect rectification, while the aircraft operates between scheduled maintenance; and

(iii) at the completion of any maintenance on an aircraft component when such maintenance is conducted off the aircraft;

(b) the Certificate of Release to Service shall be in a form prescribed by the Director of Civil Aviation;

(c) the Certificate of Release to Service shall reference the data specified in instructions of a manufacturer or air operator or the aircraft maintenance programme which itself may cross-reference to instruction in the manufacturer maintenance manual, service bulletin, etc;

(d) where instructions under paragraph (3) include a requirement to insure that a dimension or test figure is within a specific tolerance as opposed to a general tolerance, the dimension or test figure shall be recorded unless the instruction permits the use of "GO/NO-GO" gauges. It shall not be sufficient to state that the dimension or the test figure is within tolerance;

(e) the date maintenance was carried out on an aeronautical product shall include the period when the maintenance took place relative to any life or overhaul limitation in terms of date, flying hours, cycles, or landings as appropriate;

(f) where extensive maintenance has been carried out, it shall be acceptable for the Certificate of Release to Service to summarize the maintenance as long as there is a cross-reference to the work-pack record containing full details of maintenance carried out. Dimensional information shall be retained in the work-pack record;

(g) the person issuing the Certificate of Release to Service shall use a full signature and preferably a certification stamp except in the case where a computer release to service system is used. In this latter case, the Approve Maintenance Organisation shall satisfy the Director of Civil Aviation that only the particular person can electronically issue the Certificate of Release to Service;

(h) an Approved Maintenance Organisation may only defer maintenance in exceptional circumstances and then only in accordance with procedures specified in its Maintenance Procedures Manual.

***Standard NO*: - 4.11 MAINTENANCE DATA**
Regulation 32

Maintenance Data under Regulation 32 shall meet the following minimum standards:

(a) the Approved Maintenance Organisation shall be in receipt of all maintenance data appropriate to support the maintenance work performed from the Director of Civil Aviation, the aircraft and associated aeronautical product design organisation, and any other approved design organisation in the State of Design, as appropriate;

(b) some examples of maintenance-related documents are—

(i) Civil Aviation Regulations;
(ii) associated advisory material;
(iii) airworthiness directives;
(iv) maintenance manuals of the manufacturer;
(v) repair manuals;
(vi) supplementary structural inspection documents;
(vii) service bulletins;
(viii) service letters;
(ix) service instructions;
(x) modification leaflets;
(xi) aircraft maintenance programme; and
(xii) NDT manual, etc.

Note 1: Paragraph (1) primarily refers to maintenance data that has been transcribed from the Director of Civil Aviation and all holders of Type Certificates into the format of the Approved Maintenance Organisation, such as customized maintenance cards or computer base data.

Note 2: To obtain acceptance from the Director of Civil Aviation, it is important that accuracy of transcription is assured.

(c) a procedure shall be established to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme;

(d) maintenance data shall be made available in the work area in close proximity to the aircraft or aeronautical product being maintained and for supervisors, mechanics, and certifying staff to study; and

(e) where computer systems, and microfilm and microfiche reader printers are used to provide maintenance data, the number of computer terminals and reader printers shall be sufficient in relation to the size of the work programme to enable easy access, unless the computer system and reader printers can produce paper copies.