



APPLICATION & PROCESS: MAINTENANCE ORGANIZATION APPROVAL

SECTION 1 GENERAL

1.1 PURPOSE

- A. This Advisory Circular (AC) is issued to provide guidance and information to organisations and operators on the certification process for maintenance organisation approvals.
- B. The process is designed to give guidance to the prospective maintenance organisation has satisfied all the regulatory and relevant safety requirements and is capable of fulfilling and maintaining the approval standards.

1.2 STATUS OF THIS ADVISORY CIRCULAR

This is an original issuance of this AC.

1.3 BACKGROUND

- A. ICAO Standards in Annex 6, Parts 1 and 3, Operations of Aircraft, requires that, before issuing an approval to a maintenance organization, the State must assess the conformance of the maintenance organization.
- B. GCADs Part 6 establishes the specific requirements for the approval of maintenance organizations that parallel the ICAO Standards.

1.4 APPLICABILITY

- A. This guidance is applicable to all organizations that intend to provide maintenance to prepare aircraft for—
 - 1) Continuing airworthiness under the requirements of GCADs Part 5;
 - 2) Maintenance under the requirements of GCADs Part 6;
 - 3) Maintenance for AOC holders under the requirements of GCADs Part 09; and
 - 4) Other operators

1.5 RELATED DIRECTIVES

The following directives are directly applicable to the guidance contained in this advisory circular—

- GCADs Part 5, Aircraft & Component Original Certification

- Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the directives, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.
- Where a directive contains the words “prescribed by the Authority,” the AC may consider to “prescribe” a viable method of compliance, but status of that “prescription” is always “guidance” (never a directive).

- GCADs Part 5, Continuing Airworthiness
- GCADs Part 6 , Approved Maintenance Organization
- GCADs Part 09 , AOC Certification & Administration

1.6 RELATED PUBLICATIONS

For further information on this topic, individuals and organizations are invited to consult the following publications—

1) Ghana Civil Aviation Authority(GCAA)

- ◆ AC 06-002, Acceptable AMO Manuals

Copies may be obtained from the GCAA Safety Regulations Department.

2) International Civil Aviation Organization (ICAO)

- ◆ Annex 6, Part 1, International Commercial Air Transport –Aeroplanes
- ◆ Annex 6, Part 2, International General Aviation – Aeroplanes.
- ◆ Annex 6, Part 3, International Operations – Helicopters
- ◆ Annex 8, Airworthiness of Aircraft
- ◆ Document 9760, Airworthiness of Aircraft.

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

1.7 DEFINITIONS & ACRONYMS

A. The following definitions are used in this advisory circular—

- 1) **Quality.** The degree to which a product or service meets the requirements of the customer, including the relevant airworthiness requirements;
- 2) **Quality control.** A management system for programming and coordinating the ongoing quality and improvement efforts of the various groups in an organization to permit the completion of aircraft maintenance in accordance with—
 - (a) The requirements of the GCADs; and
 - (b) Any specific requirements of the organization or customer.
- 3) **Quality assurance.** The overall supervision and management of quality standards to—
 - (a) Verify that the standards are appropriately complied with; and
 - (b) If necessary, initiate corrective and preventive actions for improvement of the system functioning.

B. The following acronyms are used in this advisory circular—

- 1) **AC** – Advisory Circular
- 2) **GCAA** – Ghana Civil Aviation Authority
- 3) **GCAA-SRD** – GCAA Safety Regulations Department
- 4) **GCADs** – Ghana Civil Aviation Directives
- 5) **RII** – Required Inspection Item

1.8 OPERATOR RESPONSIBLE FOR MAINTENANCE

A. Ghana Civil Aviation Directives place an obligation on the operator to ensure that their aeroplanes operated are maintained in an airworthy condition.

Aeroplanes and helicopters may not be operated unless they are maintained and released by an approved maintenance organization or an equivalent system. .

B. The operator must submit an application for Certificate of Airworthiness for the aircraft proposing the system of airworthiness. The GCAA will take into account the complexity of aircraft and the degree of likely maintenance activity when determining the acceptability of the proposed system of airworthiness for that aircraft.

1.8.1 MAINTENANCE CONTROL MANUAL

- A. It is the responsibility of the aircraft operator to ensure that a maintenance control manual is provided for the use and guidance of maintenance and operational personnel.
- The operator is required to ensure that the manual is amended and revised as necessary and that copies of the changes are distributed to holders of the manual.
 - The Maintenance Control Manual must include the minimum subjects specified in GCADs Part 09.

1.8.2 MAINTENANCE PROGRAM

The operator must have an approved maintenance program approved by the GCAA for use and guidance of maintenance and operational personnel and to ensure that the maintenance of their aircraft is performed in accordance with this maintenance program.

1.8.3 USE OF APPROVED MAINTENANCE ORGANIZATIONS

Although an operator may include a maintenance facility within its organization, many operators now contract maintenance to a separate organization.

SECTION 2 GENERAL REGULATORY MAINTENANCE CONCEPTS

2.1 GCAA APPROVAL REQUIRED

GCADs Part 6 prohibits a person to operate as an approved maintenance organisation (AMO) without or in violation of a maintenance organization approval issued by the GCAA.

2.2 SPECIFIC APPROVALS REQUIRED

- A. The maintenance organizations seeking approval for the following must submitted the following to the GCAA—
- 1) Approval of the organization;
 - 2) Maintenance organization's procedures manual;
 - 3) Maintenance procedures and quality assurance system;
 - 4) Facilities;
 - 5) Personnel;
 - 6) Records; and
 - 7) Maintenance release.

2.2.1 COMPLETE ORGANIZATION REQUIRED

- A. The GCAA will only grant approval to a whole organization headed by an accountable manager who has the necessary executive authority (including financial) to take corrective actions.
- B. This manager is responsible to the GCAA for ensuring—
 - 1) Compliance with the terms and conditions of the approval; and
 - 2) Correction of any deficiencies identified by the quality assurance system (or the GCAA).

2.2.2 APPLICATION FOR ADDITIONAL RATING TO THE EXISTING AMO APPROVAL

- A. An approved maintenance organisation may apply for—
 - 1) Extension of the AMO ratings;
 - 2) Inclusion of additional capability; or
 - 3) Major change to the facility.
- B. The AMO must submit to the GCAA an application for AMO rating up grade or variation together with the proposed amendment / variation.
- C. Depending on the rating or up-grade applied for, the GCAA shall evaluate the application and advise whether there is need to carry out a pre-approval inspection and payment inspection facilitation and approval fee.

2.3 OTHER CHANGES TO THE AMO

- A. When the AMO wishes to make changes like the name, address and location it is necessary to inform the GCAA of such changes in writing and to submit the amendments to the Maintenance Organization Procedures Manual (MOPM) including the Accountable Manager's revised commitment statement for approval.
- B. Amendments to the Approval Certificates will not change the expiry date of the current certificate except in the case where the changes notification is concurrent with the renewal application.

2.4 SUB-CONTRACTING MAINTENANCE WORK

- A. An AMO, according to Part 6 of the GCADs may sub-contract its maintenance functions to another Approved Maintenance Organisation.
- B. If, however the sub-contracted AMO is not approved by the GCAA, the following practices must be applied—
 - 1) The contracted AMO must hold an approval from the appropriate CAA for the work which is being sub-contracted;
 - 2) The contracting AMO must retain responsibility for quality control of the sub-contracted activities, including the appropriate airworthiness regulatory requirements; and
 - 3) Have necessary procedures (i.e. maintenance agreement) for the control of the sub-contracted activities.



The sub-contracting AMO remains responsible for the quality and safety of maintenance released to service by the sub-contracted AMO.

SECTION 3 AMO CERTIFICATION PROCESS

3.1 PHASE ONE: PRE-APPLICATION

3.1.1 DECLARATION OF INTENT

- A. The organization or individual intending to request maintenance approval(s) should officially advise the GCAA that they intend to apply for this approval.
- B. This is normally accomplished by the submission of a formal letter of intent (or the Pre-Application Statement of Intent form).

3.1.2 PRE-APPLICATION MEETING

- A. The operator is entitled to a pre-application meeting to provide more specific guidance regarding the submission of a complete formal application.
- B. The operator may, however, choose to submit their application without attending the meeting.

3.1.3 PRE-APPLICATION MEETING CONTENTS

This meeting will normally contain a discussion of the—

- 1) Contents of this advisory circular;
- 2) Contents of AC 06-002; and
- 3) GCADs Part 6 requirements.

3.2 PHASE TWO: INITIAL APPLICATION REVIEW

3.2.1 HANDLING OF THE SUBMITTED APPLICATION

- A. The submission of the formal application will not be treated by the GCAA as formal event. It will simply be date-stamped for processing.
- B. The organization may request a meeting to present the application, but the GCAA will not comment on the quality of the application at that time.

3.2.2 INITIAL APPLICATION REVIEW MEETING

The GCAA will hold an internal meeting at a later day to determine if the contents of the application are acceptable for processing. The standard used will be that the application—

- Is complete (all required documents); and
- Complies with the general requirements for such applications.

3.2.3 FORMAL REJECTION OR ACCEPTANCE

- A. Shortly after the GCAA's internal meeting, they will schedule a formal meeting to officially—
 - 1) Reject the application, or
 - 2) Accept the application package for processing through the document conformance phase.
 - B. If the initial review and meeting are found to be acceptable, the GCAA will then accept the documents for processing.
 - C. During this meeting the GCAA will discuss the applicant's proposed schedule of events. The applicant will be advised of the feasibility of the proposed schedule of events.
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3.3 PHASE THREE: DOCUMENT CONFORMANCE

3.3.1 USE ADVISORY CIRCULAR

The applicant should use this advisory circular during the development of its formal application submission.

3.3.2 CONFORMANCE CHECKLIST

A. The most accurate indicator of the completeness of the maintenance organization certification is the GCADs Part 6 conformance checklist in its final form.

B. Usually the initial conformance checklist submitted by an operator is not accurate with respect to the manual references and comments regarding the conformance of the company documentation to the applicable directives.



- This conformance checklist must be accurate before the certification can be completed.
- The organization should make every effort to have it acceptable at the time of submission of the application.

C. This checklist will be continually updated during this process to reflect the accurate or revised manual procedures.

Obtain a template copy of the **GCADs Part 6** Con- formance Checklist from the GCAA.

D. The final conformance checklist will be inserted in the Completed Certification Report binder as one of the primary “proofs” that, at the time of certification, the applicant was in conformance with the minimum standards of the applicable directive.

3.3.3 ORGANIZATION

A. Evaluation of the applicant’s organization and key personnel associated with the proposed maintenance organization will occur early in this phase.

B. If the GCAA has any objections or reservations regarding the proposed organization or key personnel, these will be shared with the applicant as soon as possible.

C. This urgency will also apply to any service providers proposed for use in the maintenance organization process.

The contractual arrangements with these personnel and the assigned responsibilities must be understandable to the GCAA.

3.3.4 RELEVANT STANDARDS FOR CONFORMANCE

A. The GCAA will evaluate proposed AMO documents through comparisons of the proposed information, policy and procedure with the—

- 1) Submitted conformance checklist;
- 2) Advisory circulars and other relevant manuals;
- 3) Relevant international standards.

B. Interim approvals and acceptance will be formal provided to the applicant as each document is reviewed and found acceptable.

3.3.5 FORMS & RECORDS

A. The applicant will be using forms, records and other documents to ensure conformance with the applicable requirements.

B. These documents must be easy to understand and use.

3.3.6 TRAINING OF PERSONNEL

- A. The requirements provided in the GCADs Part 6 provides for a training program for these personnel.
- B. The submitted training program and curriculums include all required maintenance subjects and exercises will be thoroughly reviewed to meet the training objectives.

3.3.7 QUALITY ASSURANCE

- A. Some applicants will not perform all aspects of the maintenance organization process using company personnel or equipment.
- B. This is an area where the set-up of good quality audits by the organization will be vital to the continued conformance to the minimum standards for functioning of the maintenance organization.

3.4 PHASE FOUR: INSPECTION & DEMONSTRATION

- A. In practice, the applicant will experience the following inspections in this phase—
 - 1) Housing and facilities;
 - 2) Tools and equipment;
 - 3) Precision test equipment;
 - 4) Stores (parts control);
 - 5) Technical Data;
 - 6) Shops.
 - 7) Training facility;
 - 8) Training Records;
 - 9) Certifying Staff Records. and
 - 10) Training-in-progress (for personnel and certifying staff)

3.5 PHASE FIVE: FINAL CERTIFICATION ACTIONS**3.5.1 ISSUANCE OF FINAL APPROVALS**

- A. All documents previously granted interim approval during the certification will now be granted operational approval by the GCAA.
- B. At a minimum, these approvals will be given to AMO—
 - 1) Manuals and programs;
 - 2) Maintenance programs
 - 3) Training curriculums;
 - 4) Special equipment; and
 - 5) Documents, such as forms, records.

3.5.2 ISSUANCE OF MASTER OPERATIONS SPECIFICATIONS

- A. The master operations specifications for the AMO will be issued to show the authorizations granted to the maintenance organization.
- B. A print-out of that amended operations specifications shall be circulated for GCAA and maintenance organization management signatures.

3.5.3 ISSUANCE OF AMO WALL DISPLAY CERTIFICATE

The wall display certificate will be issued to those maintenance organizations that are found to be in conformance with the requirements of GCADs Part 6.

3.6 ON-GOING VALIDATION OF BASIS FOR APPROVALS

3.6.1 ANNUAL SERIES OF GCAA INSPECTIONS

- A. The GCAA will schedule and conduct a series of inspections annually.
- B. Any issues identified by the GCAA must be corrected by the AMO management on a timely basis.
- C. The consolidation of those inspections and the resolution of any safety or maintenance issues identified by the GCAA will be the basis for the renewal of the AMO approvals.

3.6.2 AMENDMENTS TO THE AMO APPROVALS

For amendments to the AMO approvals, especially curriculums or equipment, the maintenance organization should submit the AMO application form provided in Appendix A at least 30 days prior to planned amendment.

3.6.3 RENEWAL OF AMO CERTIFICATE

The AMO should submit the AMO application form provided in Appendix A to request a renewal at least 30 days prior to expiration of the certificate.

SECTION 4 CONTENTS OF THE APPLICATION

4.1 PRIMARY APPLICATION DOCUMENTS

The application documents that must be submitted separate documents include—

- 1) Completed AMO application;
- 2) GCADs Part 6 conformance checklist;
- 3) Maintenance Organization Procedures manual (2 copies);
- 4) Training curriculums (may be included in the MOPM Manual or in separate document(s));
- 5) Management resumes;

4.2 OTHER REQUIRED DOCUMENTS & INFORMATION

The following may be submitted as separate documents or included within the primary application documents—

- 1) Organizational structure;
- 2) Designated accountable manager;
- 3) Description of Quality Assurance System; and
- 4) Proposed maintenance records
- 5) A list of all AMO certificates and ratings issued by any Contracting State other than Ghana to the maintenance organization; and
- 6) A list of the maintenance functions to be performed for the AMO by another service provider.

4.3 OTHER REQUIREMENTS FOR GCAA REVIEW

The following items must be available for GCAA inspection during the Inspection Phase of the certification include—

- (a) Manufacturer's maintenance manuals
 - 1) Adequate quantities of blank copies of the forms, records and logs that will be used;
 - 2) Current copies (as appropriate) of—
 - (a) Ghana Civil Aviation Directives;
 - (b) GCAA advisory circulars
 - (c) ICAO Annexes, Documents and Circulars;
 - (d) International technical standards documents
 - 3) Tool and instrument calibration records as appropriate;
 - 4) Individual lesson plans to accomplish the training included in the approved curriculums;
 - 5) Technical data for maintenance
 - 6) Other items as prescribed by the GCAA.

SECTION 5 COMPLETION OF THE APPLICATION

- A. A copy of the application for an approved maintenance organization may be obtained from the GCAA Flight Safety Standards Department. This application is intended as a checklist for the applicant and an official record which will reside in the SRD files after this application has been processed.

Refer to Appendix A for a complete example of the application form.

	APPLICATION FOR APPROVED MAINTENANCE ORGANIZATION CERTIFICATE	INSTRUCTIONS <small>Print or type. Do not write in shaded areas, these are for GCAA use only. Submit original only to the GCAA Safety Regulations Department or a GCAA Authorized Person. If additional space is required, use an attachment.</small>
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- B. Section A of the application must contain the applicant's contact information.
- It also contains the provision to enter the address of the main maintenance base and satellite bases
 - Because this information will also appear in the MOPM Manual, it is only necessary to enter the city names of the satellite base(s).

A. AMO INFORMATION:				
1. NAME OF AMO APPLICANT OR HOLDER	2. PERMANENT ADDRESS (Street or PO Box Number)			
3. TELEPHONE AND FAX	4. CITY	STATE/PROVINCE	MAIL CODE	COUNTRY
5. LOCATION OF MAIN OPERATIONS BASE			7. LOCATION OF SATELLITE BASE(S)	

- C. Section B of the application provides the space to check the type of action required by the maintenance organization applicant.
- If this is an original application, check the block for the "level" of AMO approval.
 - B1 should be checked by the applicant who is submitting an original application for certification.

- B2 should be checked by the applicant who is submitting a request for renewal. (Please include the AMO certificate number and the expiration date.). The applicant should also check whether any changes are requested.

B. APPLICATION IS HEREBY MADE FOR:		
<input type="checkbox"/>	1. Issuance of a AMO Certificate and associated ratings to conduct the maintenance, repairs and modifications identified below, and for the approval of the AMO.	
<input type="checkbox"/>	2. Renewal of existing AMO Certificate and associated ratings.	AMO Certificate #: _____ Expiration Date: _____
	(a) <input type="checkbox"/> Without changes to the currently approved ratings, classes and equipment.	
	(b) <input type="checkbox"/> With addition of ratings (s) identified below for which approval is requested	
	(c) <input type="checkbox"/> With deletion of ratings (s) identified below from the operations specifications.	
<input type="checkbox"/>	3. Amending the current AMO Certificate and associated ratings.	AMO Certificate #: _____ Expiration Date: _____
	(a) <input type="checkbox"/> By adding the ratings and classes identified below for which approval is requested.	
	(b) <input type="checkbox"/> By deleting the ratings and classes (s) identified below from the operations specifications.	

D. Section C provides for the identification of maintenance ratings that are requested as apart of this application.

- The ratings for which action is requested should be listed in the “Rating” column.
- The ADD box should be checked in the case of new applicant or a currently approved box for “ADD” should be checked.
- The DELETE box should be checked if the applicant no longer maintains the capability to provide this instruction.
- “Class Description” should be provided where possible.
- “Equipment Description” must be provided.

C. AMO RATINGS:				
ADD	DELETE	RATING	CLASS/DESCRIPTOR	EQUIPMENT DESCRIPTION
<input type="checkbox"/>	<input type="checkbox"/>	1.		
<input type="checkbox"/>	<input type="checkbox"/>	2.		
<input type="checkbox"/>	<input type="checkbox"/>	3.		
<input type="checkbox"/>	<input type="checkbox"/>	4.		
<input type="checkbox"/>	<input type="checkbox"/>	5.		
<input type="checkbox"/>	<input type="checkbox"/>	6.		
<input type="checkbox"/>	<input type="checkbox"/>	7.		
<input type="checkbox"/>	<input type="checkbox"/>	8.		
<i>If more space is needed, please attach additional page(s).</i>				

E. Section D of this application is used as a checklist of the additional documents that are included in this application package. (The requirements of each of these documents are discussed separately in this advisory circular.)

D. ADDITIONAL APPLICATION ATTACHMENTS:		
<input type="checkbox"/> 1. AMO Procedures Manual	<input type="checkbox"/> 5. Capability List(s)	<input type="checkbox"/> 7. Facility Description & Layout
<input type="checkbox"/> 2. Part 5 Conformance Report	<input type="checkbox"/> 6. List of Service Providers & Functions	<input type="checkbox"/> 8. Training Program
<input type="checkbox"/> 3. Management Resumes	<input type="checkbox"/> 7. Proposed Maintenance Release	<input type="checkbox"/> 9. Quality Assurance System
<input type="checkbox"/> 4. Certifying Staff Resumes	<input type="checkbox"/> 8. Sample Work Package	<input type="checkbox"/> 9. Proposed Qualification Records
<i>If more space is needed, please attach additional page(s).</i>		

F. Section E of this application is provided for the applicant’s certification that all of the necessary items related to this application are provided and are accurate.

E. APPLICANT’S CERTIFICATION— I certify that all statements and answers provided by me on this application form are complete and true to the best of my knowledge and I agree that they are to be considered as part of the basis for issuance of any GCAA certificate to me.		
A person shall not with intent to deceive by making any false representation for the purpose of procuring for himself or any other person the grant, issue, renewal or variation of any such license.	1. DATE	2. APPLICANT SIGNATURE:
	3. PRINTED NAME AND TITLE OF APPLICANT:	

SECTION 6 CONFORMANCE WITH REGULATORY REQUIREMENTS

6.1 CONFORMANCE CHECKLIST

- A. The GCADs Part 6 conformance checklist is a critical submission for any maintenance organization desiring GCAA approval.
- B. Completion of this checklist will validate conformance with GCADs Part 6.
- C. The maintenance organization must determine the applicability of each Section and subparagraph to their proposed maintenance organization.

- The **GCADs Part 6** conformance checklist is available from the GCAA in MS Word format.
- Refer to AC 00-005 for detailed guidance for the completion of a regulatory conformance checklist.

- Reference and comments will be recorded in the columns and rows provided in the conformance checklist.



If the application does not contain the fully completed conformance checklist, the entire application package will be rejected.

6.2 REQUEST FOR MAINTENANCE EXEMPTIONS OR WAIVERS

6.2.1 SUBMISSION OF PROPER REQUEST

If submitted with the completed GCADs Part 6 Conformance Checklist, the GCAA-SRD may make requests for—

- 1) Exemptions;
- 2) Deviations; and
- 3) Waivers.



The GCAA will not process a request for exemption, deviation or waiver unless it is identified in the submitted **GCADs Part 6** conformance checklist.

6.2.2 PROCESSING OF THE REQUEST

The request will be evaluated through the process prescribed in GCADs Part 1 for—

- 1) Adequate justification;
- 2) Provision of an equivalent level of maintenance and safety;
- 3) No adverse effect on the quality of instruction or evaluation;
- 4) No conflict with existing international safety oversight agreements; and
- 5) The public interest.



The maintenance organization should have a fall-back position should the GCAA disapprove the request.

SECTION 7 CONSIDERATIONS FOR MAINTENANCE APPROVALS

7.1 SYSTEMS OF INSPECTION & QUALITY MANAGEMENT

- A. Aircraft cannot be released to service following scheduled or unscheduled maintenance unless certifications are made by appropriately licensed and approved personnel that the tasks have been completed satisfactorily and in accordance with the procedures described in the maintenance organization's procedures manual.

- B. There are three generally accepted methods of meeting this requirement—
- 1) Licensed personnel either complete the task, or are responsible for its completion, and issue the necessary certification;
 - 2) The staff of a production department complete the task, with a separate inspection department responsible for the necessary certification; or
 - 3) The staff of the production department complete the task to approved quality control standards and also issue the necessary certification, while a separate quality assurance department performs sample audits to determine that the approved procedures are being adhered to and that the final product is satisfactory.
- C. In practical terms, it is very difficult to manage quality control in circumstances where completion of a task and determination of compliance with the associated quality requirements are responsibilities of separate persons as above.
- D. The highest standard of quality of aircraft maintenance is very much dependent on the competence of the personnel who complete the tasks; it is not something that can be "inspected-in".
- E. Thus responsibility for quality control management is best vested in a competent production work force which completes the tasks and is qualified to accept responsibility for certification of them, in accordance with prescribed procedures.
- F. No system of quality management is complete without an element of quality assurance.
- G. This provides, through an independent audit system, the necessary feedback to the management of the approved organization to ensure that—
- 1) Through product sampling, the requirements of the customer, including those related to airworthiness, are being satisfied;
 - 2) The procedures of the organization are being complied with and that they remain appropriate for the undertakings of the organization; and
 - 3) The organization remains in compliance with the requirements and conditions of the approval granted by the GCAA.

Of the three methods described here 3) is considered the optimum for the present generation of large transport aircraft.

Refer to Section 8.0 of this AC and AC 00-002 for further guidance material on quality management.

7.2 MAINTENANCE ORGANIZATION'S PROCEDURES MANUAL

- A. GCADs Part 6 places an obligation on the approved maintenance organization to provide a maintenance organization's procedures manual.
- B. The purpose of the procedures manual is to—
- 1) Provide to the personnel the necessary information to enable them to fulfil their various roles in complying with the terms and conditions of the approval and the relevant airworthiness requirements;
 - 2) Provide airworthiness management for the maintenance activities undertaken by the organization; and
 - 3) Substantiate to the GCAA how the activities included in the approval and the relevant airworthiness requirements will be satisfied.

Refer to AC 05-002 for further guidance on the contents of the MOPM.

- C. The provision of the MOPM as an integral part of the approval of the organization.
- D. In the case of large organizations, the manual may be divided into two or more volumes.
- The first volume may contain the essential requirements for management of the approval and compliance with the appropriate airworthiness requirements, including the control of the contents of the other volumes.



The manual and the subsequent amendments to the manual must be acceptable to the GCAA before use by the maintenance organization..

7.3 PERSONNEL

- A. The organization must employ sufficient personnel to plan, perform, supervise and inspect the activities included in the approval.
- B. Because organizations engaged in aircraft maintenance for commercial reasons are under constant pressure to achieve maximum work throughput, the AMO must have the necessary personnel to match the anticipated workload without any reduction in the standards accepted by the GCAA.
- C. The AMO is required to establish the competence of maintenance personnel in accordance with a procedure and to a level acceptable to the GCAA
- D. The person signing a maintenance release shall be qualified in accordance with GCADs Parts 2 and 6.
- E. It is important to realize that aircraft maintenance is an integrated activity, involving technical records, planning, supervision, quality control or quality assurance personnel, mechanics and specialist technicians such as non-destructive test personnel.
- Procedures should exist to ensure that these persons are assessed for competence in relation to their particular role within the organization.

7.4 TRAINING POLICY

- A. The maintenance organization should ensure that all maintenance personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities.
- Air transport is an industry which, more than most, has to adapt to technology in a constant state of evolution.
 - Training provided to personnel engaged in aircraft maintenance needs to mirror this state of change.
- B. The AMO must include provisions for initial, continuing and refresher training of its personnel during assessment for approval by the GCAA.
- The training needs of mechanics, quality control and quality assurance personnel, supervisors, planners and technical records personnel as well as of those persons signing a maintenance release must be addressed..
- C. This training should not be limited to providing knowledge of the products which are maintained by the organization.
- There is a need to ensure that all personnel are given training on the company procedures associated with the approval.
 - Where the organization utilizes specialized techniques such as non-destructive inspection or novel methods of repair, appropriate training should be provided.

- D. The training program should also include training in knowledge and skills related to human performance, including coordination with other maintenance personnel and flight crew.

Human Factors aspects are recognized to be an essential element in any aviation activity.

7.5 QUALIFICATION OF PERSONS SIGNING A MAINTENANCE RELEASE

- A. The requirements for licensing of a person signing the maintenance release are provided in GCADs Parts 2 and 6.
- The qualification of AMO certifying personnel employed by the organization shall be equivalent to the qualification required in GCADs 2 and 6 for licensed individuals.
- B. All certifying personnel signing a maintenance release should be familiar with the relevant company systems and procedures, and have appropriate knowledge of the aircraft or component being maintained.
- The AMO must ensure compliance with this requirement is determined before a certifying authorization is granted.

7.6 MAINTENANCE RELEASE

- A. A maintenance release shall be completed and signed to certify that the maintenance work performed has been completed satisfactorily and in accordance with procedures described in the maintenance organization's procedures manual.
- B. A maintenance release shall contain a certification including—
- 1) The basic details of the maintenance carried out;
 - 2) The date such maintenance was completed;
 - 3) When applicable, the identity of the approved maintenance organization; and
 - 4) The identity of the person or persons signing the release.
- C. A maintenance release, which certifies that the maintenance work has been completed in a satisfactory manner, is necessary before flight at the completion of any package of maintenance specified by the customer in accordance with such customer's responsibility.
- D. This package of maintenance may include any one or a combination of the following elements—
- 1) A check or inspection from the operator's aircraft maintenance programme;
 - 2) Implementation of Airworthiness Directives, Components Overhauls, repairs, modifications, engine changes, aircraft component replacements and defects rectification.
- E. In all the cases, this maintenance release to service (for the aircraft or for the component) means only that the work ordered by the customer (being most of the time the aircraft operator) has been completed satisfactory by the approved maintenance organization.
- It does not mean that the work ordered by the customer was sufficient to ensure the airworthiness of the aircraft or the component.
 - The responsibility to get the aircraft airworthy or to install onboard only airworthy components remains with the aircraft operator.

This maintenance release should not be confused with the action that must be taken by the operator to give evidence that the aircraft is airworthy and fit to undertake a specific flight.

7.7 DEFERRED MAINTENANCE

- A. As stated previously, the operator is responsible to ensure the airworthiness of the aircraft and the serviceability of both operational and emergency equipment by the—
 - 1) Accomplishment of pre-flight inspections;
 - 2) Rectification to an approved standard of any defects and damage affecting safe operation, taking into account the approved minimum equipment list and configuration deviation list if available for the aircraft type;
 - 3) Analysis of the effectiveness of the operator's approved aircraft maintenance programme;
 - 4) Accomplishment of any operational directives, Airworthiness Directive and any continued airworthiness requirement made mandatory by the CAA; and
 - 5) Accomplishment of modifications and repairs in accordance with a standard approved by the CAA.
- B. it is vital that the operator be informed when the maintenance organization could not fully comply with the operator's work order.
 - For example; to the operator's time limitations due to (time constraints not acceptable for the maintenance organization or to a lack of components or tools.
- C. Normally, a maintenance release cannot be delivered in the case on non-compliance, therefore the AMO should follow a procedure which states what actions the mechanic, supervisor and certifying staff should take to bring the matter to the attention of the relevant person in charge of the coordination between the operator and the approved maintenance organization.
- D. If the operator should agree to the deferment of full compliance, then the maintenance release may be issued by the approved maintenance organization subject to details of deferment being endorsed on the certificate including the operator's acceptance.
- E. Whether or not the aircraft operator has the authority to defer maintenance is an issue between the aircraft operator and its GCAA.

7.8 FACILITY REQUIREMENTS

- A. Facilities appropriate to the planned work should be available. These include access equipment and, in particular, protection from adverse weather conditions.
- B. Specialized workshops should be segregated to ensure that environmental or work area contamination is unlikely to occur.
- C. Because aircraft maintenance is document-intensive, adequate office facilities should be available for personnel engaged in the management of quality, planning and technical records.
- D. Storage facilities should be provided for parts, equipment, tools and material.
 - Storage conditions should be such that unauthorized access to serviceable parts is prevented and that there is complete segregation of serviceable and unserviceable parts.
 - The facilities should provide security and prevent deterioration and damage to stored items.

7.9 EQUIPMENT, TOOLS, MATERIAL, & AIRWORTHINESS & MAINTENANCE DATA

- A. Equipment, tools, material, and airworthiness and maintenance data must be available for completion of the scope of activities included in the GCAA approval.

- B. For maintenance organizations that are not also aircraft operators, it is not uncommon to expect some specialized equipment, tools and data in respect of a particular variant of an aircraft type to be provided by the operator.
 - The approved arrangement for the use of these articles must ensure that the activity is controlled by proper contractual arrangement between the maintenance organization and the operator.
 - The AMO must be able to show that all tools and equipment as specified in the approved data can be made available when needed.
- C. Much of the tooling and equipment associated with aircraft maintenance is subject to periodic calibration.
 - The calibration procedures and the actual standards themselves traceable to international standards must be acceptable to the GCAA.
- D. All tools and equipment that are required to be controlled in terms of servicing or calibration should be clearly identified and listed in a control register including any personal tools and equipment that the organization agrees can be used.
- E. Where the manufacturer specifies a particular tool and equipment, then that tool or equipment should be used, unless otherwise agreed by the GCAA in a particular case via a procedure specified in the AMO procedures manual.
- F. The control of these tools and equipment requires that the approved maintenance organization has a procedure to inspect/maintain and, where appropriate, calibrate such items on a regular basis and indicate to users that the item is within any inspection or service calibration time-limit.
- G. A clear system of labeling all tooling, equipment and test equipment is necessary giving information on when the next inspection or service or calibration is due and if the item is unserviceable for any other reason where it may not be obvious.
 - A register should be maintained for all precision tools and equipment together with a record of calibrations and standards used.
- H. Inspection, maintenance and calibration on a regular basis should be in accordance with the equipment manufacturer's instructions except otherwise as accepted by the GCAA.

7.10 CONTRACT & SUBCONTRACT

- A. Operators may be authorized to contract their maintenance requirements to approved maintenance organizations.
- B. Approved maintenance organizations may subcontract work to other approved maintenance organizations.
- C. The following points should be considered for these arrangements—
 - 1) The organization has its approval extended to include the subcontracted work; it assesses the competence of the subcontractor;
 - 2) The approved organization retains responsibility for quality control and release of subcontracted activities, according to the appropriate airworthiness requirements; and
 - 3) Necessary procedures should be in place for the control of subcontracted activities, together with terms of reference for the personnel responsible for their management.

7.11 COMPONENT & MATERIAL SUPPLIER & SUBCONTRACTOR CONTROL PROCEDURE

- A. The component and material supplier's evaluation must be carried out by the approved maintenance organization and the control exercised by this approved maintenance organization on the its approved or non approved contractors.

- B. The ultimate goal of the approved maintenance organization is to make sure that the—
- 1) Received component or material from its supplier is airworthy and/or
 - 2) Contracted maintenance work has been performed according to its own standards.

This component may come from a supplier (without any maintenance work contracted) or from a contractor (approved or not) in this latter case generally a maintenance task has been ordered.

7.11.1 ASSESSMENT OF THE SUPPLIERS

- A. *Where no maintenance services are provided*, the approved maintenance organization should—
- 1) Assess its suppliers (questionnaire, audit etc.);
 - 2) Implement procedures in order to retain/withdraw the authorization to use such suppliers; and
 - 3) Establish special instructions concerning the expected component/part release document (airworthiness tag, conformity statement).
- B. These documents may depend on the supplier origin (manufacturer, retailer, airline, distributors, maintenance workshop etc.).

7.11.2 ASSESSMENT OF THE APPROVED SUBCONTRACTORS

- A. Before using other AMO as service providers, the maintenance organization should describe how the following items are satisfactorily dealt with (not an exhaustive list of items) the—
- 1) Approved workshops reference list (only those included in this list can be contracted to work);
 - 2) Control of the scope of activity of the approved workshops towards the maintenance services sought by the approved maintenance organization; and
 - 3) Means internally implemented so that only those approved workshops could be used as workshops (checking the list of the approved workshops chosen from lists issued by the GCAA)

7.11.3 ASSESSMENT OF THE UNAPPROVED SUBCONTRACTORS

- A. The quality assurance system of the approved maintenance organization should include all the subcontracted activities where maintenance services are provided by an unapproved maintenance organizations.
- B. All human resources, the means and the procedures used by the subcontractor should have been treated (and controlled) in the same way as the ones coming from the approved maintenance organization.
- C. Special attention should be paid to the release to service procedure. The maintenance release is finally signed under the approval of the approved maintenance organization.

Those human resources, means and procedures must be accepted by the GCAA in the framework of its approval).

The internal control activity of the subcontracting activities must be audited by the approved maintenance organization.

7.12 OUTSIDE CONTRACTORS: INSPECTION & ACCEPTANCE REQUIREMENTS

- A. The AMO must determine the compliance of materials in general (equipment, components, standard parts, materials) received from suppliers/subcontractors (external sources). This section refers to the acceptance of materials stated as compliant ones.

- B. The approved maintenance organization may obtain component/material from various sources, including—
 - 1) Suppliers/distributors (purchase/hiring new materials or used /maintained materials);
 - 2) Other approved maintenance organizations (maintained components);
 - 3) Unapproved workshops but under cover of its own quality system (maintained components); or
 - 4) Maintenance workshops of the approved maintenance organization (internally maintained components).
- C. In all these cases, the approved maintenance organization which receives the product should define and implement reception procedures for components, standard parts, materials, new components or used maintained components.
- D. The reception procedures should, at a minimum, include the following—
 - 1) Authorization procedure for reception control and acceptance;
 - 2) Process of administrative control of the components and materials;
 - 3) Identification of the type of acceptable documents depending on the situation (e.g. new/ used components, materials, ingredients, standard parts, approved subcontracting, non approved subcontracting under cover of the organization, standard exchange, maintenance by a workshop of the organization, serviceable removed component);
 - 4) Procedure of physical control;
 - 5) Procedure of acceptance (identification of the material, marking, tagging, register, taking into account the storage limits, the life limits, the storage specificity, record of the acceptance); and
 - 6) Procedure for treatment of suspected unapproved parts (“bogus parts”) (record, notification to the GCAA).

SECTION 8 SAFETY & QUALITY MANAGEMENT

8.1 SAFETY MANAGEMENT SYSTEM

The AMO must establish a safety management system acceptable to the GCAA

Refer to AC 00-003, for guidance on the establishment of a Safety Management System.

8.2 QUALITY ASSURANCE SYSTEM

8.2.1 GENERAL

- A. In recognition of the key importance of this activity in continuing airworthiness, it is essential for the manager of the quality assurance have direct access to the accountable manager on quality issues.
- B. The maintenance organization’s systems for quality control and assurance should take into account all of the facilities and procedures utilized to ensure continuing airworthiness, where activities take place affecting the airworthiness of the aircraft and product quality for subjects not directly related to airworthiness.
- C. Quality control should therefore be effective throughout the maintenance of aircraft and quality auditing should ensure that control is being properly applied and achieving satisfactory results.

- D. The organization's quality control policies and systems should be described in the approved maintenance organization manual, together with the quality assurance audit programme in respect of product, facility and procedures.

8.2.2 PROCEDURES & PERSONNEL QUALIFICATIONS

- A. Staff assigned to quality control and assurance duties should be—
- 1) Sufficiently experienced in the company systems and procedures and technically knowledgeable of the aircraft being maintained so as to enable them to perform their duties satisfactorily;
 - 2) Experienced in the techniques of quality control and assurance or receives suitable training before taking up their duties; and
 - 3) Given clearly defined terms of reference and responsibility within the organization and having reporting lines to senior management.
- B. The department responsible for quality control and assurance should arrange for independent quality audit checks to be carried out in accordance with the audit programme.
- C. Emphasis should be placed on the company systems employed to achieve and ensure airworthiness, their suitability and effectiveness.
- D. The scope of quality checks within the organization should be based on the guidelines given below.
- E. All quality checks should be recorded and assessed and any criticisms forwarded to the person responsible for the particular facility or procedure for corrective action.
- There should be a feedback system for confirming to the quality assurance staff that corrective and preventive action has been taken and to ensure that persons concerned with any audit deficiency are made aware of both the adverse report and the outcome.

Clear terms reference are particularly important where quality assurance personnel are also expected to perform other duties in the organization.

SECTION 9 APPROVAL OF FOREIGN MAINTENANCE ORGANIZATION

9.1 GCAA POLICY

- A. All foreign maintenance organizations that are used to meet the maintenance requirements of the Ghana Civil Aviation Directives must have the approval of GCAA in order for the training received to be considered valid for licensing and operations in Ghana.
- B. All foreign specialized maintenance facilities and equipment that are used for maintenance must have GCAA approval before their use.
- C. All foreign personnel used to provide maintenance required by the GCADs must be properly licensed by the GCAA or employed and qualified by the foreign AMO.
- D. All individuals and operators must ensure that such approvals exist before using a foreign maintenance organization to satisfy GCAD maintenance requirements.



It is highly recommended that Ghana individuals and operators contact the GCAA-SRD to make this determination.

9.2 NEED FOR APPROVAL

- A. There is often a need for an individual, organization or airline to use AMOs that are located outside of Ghana to complete GCADs maintenance requirements.

- B. This is sometimes driven by cost consideration or simply because the maintenance facilities, resources, equipment and expertise necessary to support the specialized maintenance required by the airline are not available in Ghana.
- C. In principle, there is no difference between the approval of maintenance organizations based abroad and those based in Ghana.
- D. In practice, there are difficulties that are essentially linked to the fact that the GCAA may not always have the budget to ensure proper oversight of ATOs located abroad.
- E. This approach is efficient but requires that the GCAA must review and process the approval given by another State, to fully understand the conditions and the regulatory basis of the original approval.
- F. Based on this review, the GCAA may require additional conditions, including an on-site evaluation, before an approval is issued.

The principles and procedures that are described in **GCADs Part 6** and this advisory circular fully apply to foreign ATOs.

To overcome these difficulties, the GCAA may consider the approval and oversight system of the host State to issue the approval using a validation process that is provided in GCAD Part 1.

9.3 APPROVAL PROCEDURE

- A. The individual or organization desiring to use a foreign ATO, its equipment or its personnel will send a letter of intent to the GCAA-SRD outlining—
- 1) This intention;
 - 2) The proposed dates; and
 - 3) The justification for using a foreign entity.
- B. The GCAA will research the request and contact the civil aviation authorities of the country to validate the approval documents.
- In situations where specialized personnel or equipment are used to meet maintenance requirements on behalf of a Ghana operator, the GCAA airworthiness inspector must go on-site to evaluate quality and performance of the equipment and personnel.
- C. A formal approval document will be issued when the GCAA is satisfied that the maintenance organization, its equipment and its personnel—
- 1) Hold valid approvals from their civil aviation authorities for the tasks that are proposed;
 - 2) Have demonstrated their proficiency and competency for such tasks through an internationally accepted process; and
 - 3) Any necessary on-site evaluations have been conducted.
- D. That formal approval document will be—
- For foreign AMOs, a Ghana display certificate and operation specifications to the foreign ATO management.
 - For maintenance facilities or equipment not a part of the foreign AMOs approval, an approval letter to the Ghana operator specifically authorizing the functions authorized, with any necessary restrictions.

The request should also include a copy of the approval documents that the foreign CAA has issued to the AMO and/or maintenance personnel to be used.

The operator will be required to post the anticipated funds necessary for the inspector travel and on-site work before such a trip will be authorized.

A copy of all issued documents will be provided to the Ghana organization or individual making the original request for approval.

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- Where necessary, a Designated Representative Certificate of Authority from the GCAA to the checking individual (as provided in GCAD Part 1).

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APPENDIX B

Recommended Minimum Quality Audit Procedures

- A. The lists which follows is not exhaustive, but includes the principal audit checks which need to be considered.
- B. Checks on aircraft, while undergoing scheduled maintenance, for—
 - 1) Compliance with maintenance programme and mandatory continuing airworthiness requirements and ensuring that only work instructions reflecting the latest amendment standards are used;
 - 2) Completion of work instructions including the transfer of defects to additional worksheets, their control, and final collation. Action taken in respect of items carried forward, not completed during the particular inspection or maintenance task;
 - 3) Compliance with manufacturers' and the organization's standard specifications and procedures;
 - 4) Standards of inspection and workmanship;
 - 5) Condition of corrosion prevention and control treatments and other protective processes;
 - 6) Aircraft maintenance which is not limited to the normal working day; procedures adopted during shift changeover of personnel to ensure continuity of inspection and responses; and
 - 7) Precautions taken to ensure that, on completion of any work or maintenance, all aircraft are checked for loose tools and miscellaneous small items such as split pins, wire, rivets, nuts, bolts and other debris, and for general cleanliness and housekeeping.
- E. Checks on airworthiness data for—
 - 1) Adequacy of aircraft manuals and other technical information appropriate to each aircraft type, including engines, propellers and other equipment, and the continuing receipt of revisions and amendments. Availability of continuing airworthiness data, e.g., Airworthiness Directives, life limits, etc.;
 - 2) Assessment of manufacturer's service information, determining its application to aircraft types maintained and the recording of compliance or embodiment;
 - 3) Maintenance of a register of manuals and technical literature held within the organization, their locations and current amendment status; and
 - 4) Assurance that all the organization's manuals and documents, both technical and procedural, are kept up to date.
- F. Checks on stores and storage procedures for—
 - 1) The adequacy of stores and storage conditions for rotatable components, small parts, perishable items, flammable fluids, engines and bulky assemblies in accordance with the specifications adopted by the organization;
 - 2) The procedure for examining incoming components, materials and items for conformity with order, release documentation and procurement from sources approved by the organization;
 - 3) The "batch recording" of goods received and identification of raw materials, the acceptance of part life items into stores, requisition procedures for issue of items from stores;

- 4) Labelling procedures, including the use of serviceable/unserviceable/repairable labels and their certification and final disposal after installation, and labelling procedures for components which are serviceable but “part life” only;
 - 5) The internal release procedure to be used when components are to be forwarded to other locations within the organization;
 - 6) The procedure to be adopted for the release of goods or overhauled items to other organizations (this procedure should also cover items being sent away for rectification or calibration);
 - 7) The procedure for the requisitioning of tools together with the system for ensuring that the location of tools, and their calibration and maintenance status, is known at all times; and
 - 8) Control of shelf life and storage conditions in the stores; control of the free-issue dispensing of standard parts, identification and segregation.
- G. Checks on maintenance facilities for—
- 1) Cleanliness, state of repair and correct functioning of hangars, hangar facilities and special equipment and the maintenance of mobile equipment;
 - 2) Adequacy and functioning of special services and techniques including welding, nondestructive inspection (NDI), weighing, painting;
 - 3) Viewer/printer equipment provided for use with microfiche, microfilm and compact disk, ensuring that regular maintenance takes place and an acceptable standard of screen reproduction and printed copy is achieved;
 - 4) The adequacy of special tools and equipment appropriate to each type of aircraft, including engines, propellers and other equipment;
 - 5) The calibration and maintenance of tools and measuring equipment; and
 - 6) Environmental controls.
- H. Checks on the organization’s general airworthiness control procedures for—
- 1) Monitoring the practices of the organization in respect of scheduling or pre-planning maintenance tasks to be carried out in the open air and adequacy of the facilities provided;
 - 2) Operation of the system for service difficulty reporting required by the airworthiness authority;
 - 3) Authorization of personnel to issue maintenance releases in respect of inspections and maintenance tasks; the effectiveness and adequacy of training, including continuation training and the recording of personnel experience, training and qualifications for grant of authorization;
 - 4) The effectiveness of technical instructions issued to maintenance personnel;
 - 5) The adequacy of personnel in terms of qualifications, numbers and ability in all areas required to support the activities included in the approval granted by the airworthiness authority;
 - 6) The efficacy and completeness of the quality audit programme;
 - 7) Maintaining logbooks and other required records and ensuring that these documents are assessed in accordance with the requirements of the State;
 - 8) Ensuring that repairs are only carried out in accordance with approved repair schemes and practices;

- 9) Control of sub-contractors;
- 10) Control of activities sub-contracted to it, such as management of the operator's maintenance programme;
- 11) Monitoring "Exemption process control" and
- 12) Monitoring "Concession control for deviation from organization's procedures;" and
- 13) Follow-up internal reporting/occurrences.

End of Advisory Circular

