

CAAC-145 Training

Review training material and submit evidence of completion to Reception so it is entered into your training record

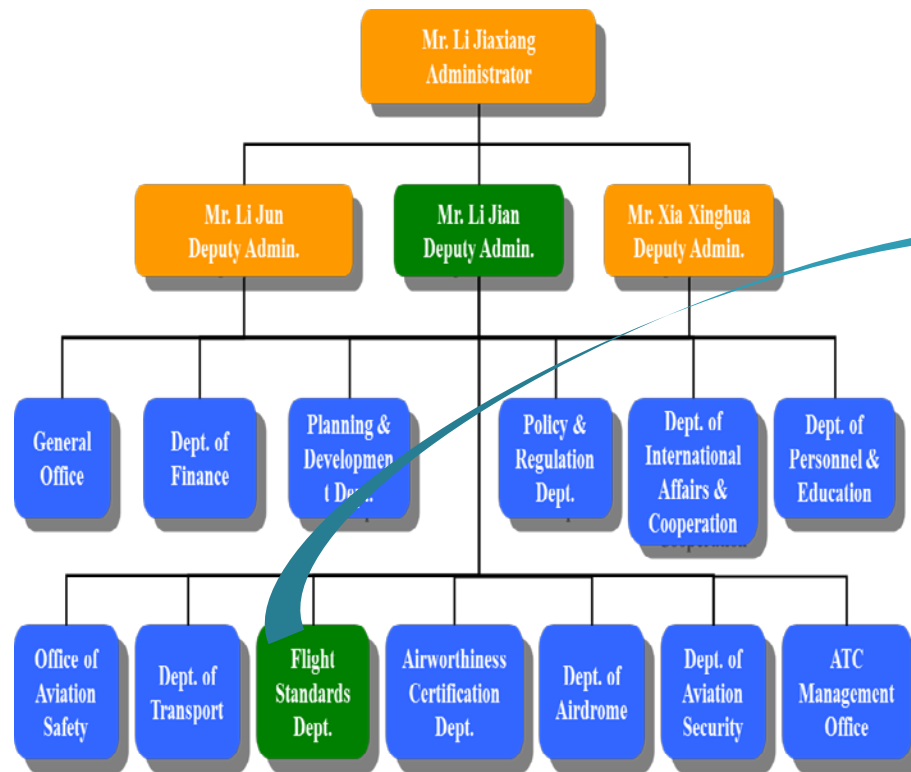


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CAAC General Introduction

CAAC Organizational Structure



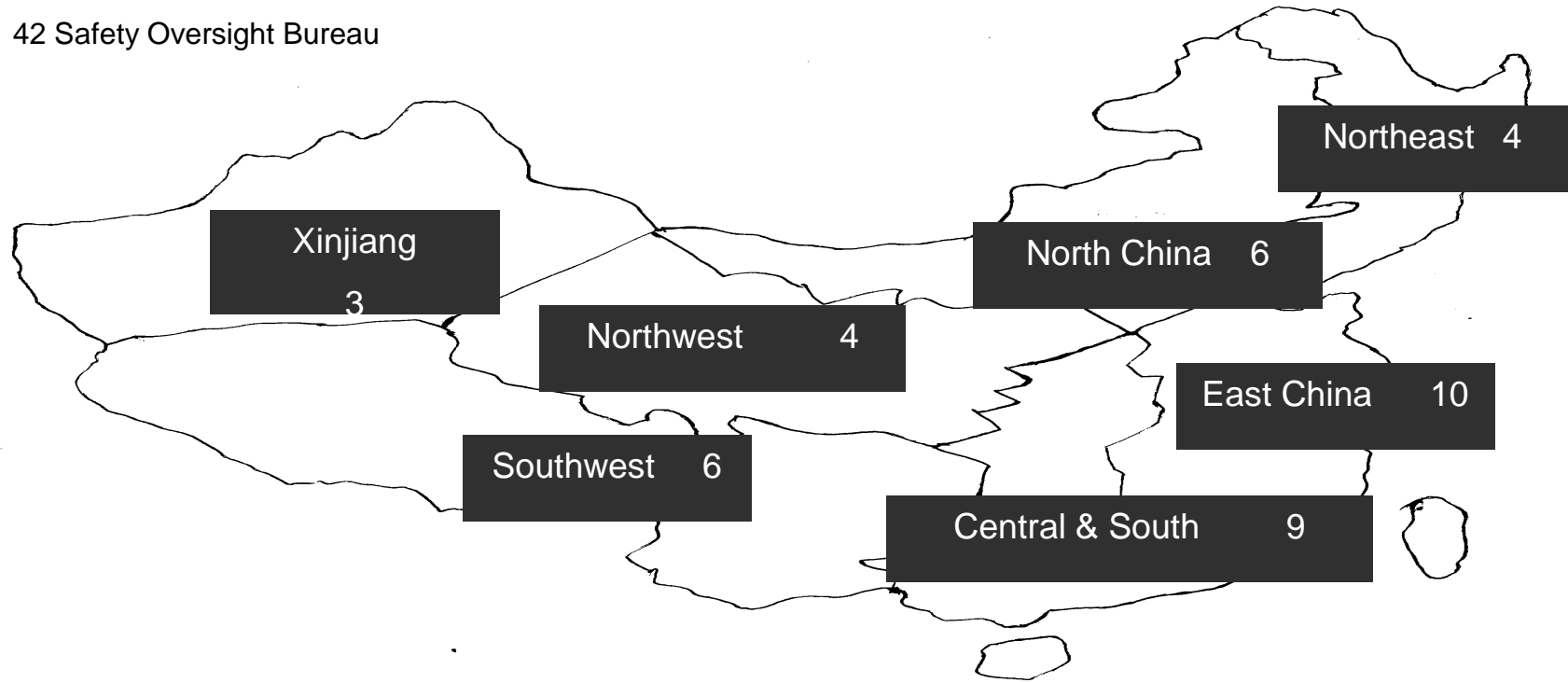
Flight Standards Dept.



CAAC General Introduction

7 Regional Administrations

42 Safety Oversight Bureau



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CAAC General Introduction (Flight Standards Dept. Rule-making)

- ❑ 21 Regulations (CCARs) were promulgated by Flight Standards Dept.
- ❑ 90 Advisory Circulars(ACs) and Procedures.
- ❑ Over 200 administrative documents.
- ❑ CCAR-43, General Rules for Maintenance and Modification.
- ❑ **CCAR-145, Civil Aircraft Maintenance Organization Certification Regulations.**
- ❑ CCAR-66, Aircraft Maintenance Personnel License Management Rules.
- ❑ CCAR-147, Certification For Maintenance Training Organization.
- ❑ CCAR-91, General Operation and Flight Rules.
- ❑ CCAR-121, Operations Certification: Large Airplanes Air Carrier.
- ❑ CCAR-135, Rules on Operation of Small Aircraft Commercial Transport Operators.

General Intro of CCAR-145 R3

- ❑ CCAR-145R3, “Civil Aircraft Maintenance Organization Certification Regulations”.
 - 6 Chapters, 39 Articles
 - 16 Advisory Circulars (AC)
 - Applicable for Domestic & Foreign MROs

- ❑ CCAR-145R3 Advisory Circulars
 - AC-145-1 Application Guide for Domestic MRO
 - AC-145-2R1 Application Guide for Foreign/Regional MRO
 - AC-145-3 List of Approved Civil Aviation Maintenance Organizations *

- ❑ CCAR-145R3 Advisory Circulars
 - AC-145-4 Maintenance Records and Reports
 - AC-145-5 Guidance for Maintenance Organization Manual Compiling
 - AC-145-6R1 Aircraft Line Maintenance

- ❑ CCAR-145R3 Advisory Circulars
 - AC-145-7 Maintenance of Aircraft Component
 - AC-145-8 Technical Documents for Aircraft and Aircraft component Maintenance
 - AC-145-9 Adoption of National and Industrial Standards

General Intro of CCAR-145 R3

- ❑ CCAR-145R3 Advisory Circulars
 - AC-145-10 Fabricating Tools and Equipment by MRO
 - AC-145-11R1 CAAC/HKCAD/AACM JMM Arrangement
 - AC-145-12 Limited Rating of Airframe Maintenance

- ❑ CCAR-145R3 Advisory Circulars
 - AC-145-13R1 Guidance for MRO Training Program Manual Compiling*
 - AC-145-15 Safety Management System (SMS) of MRO

- ❑ CAAC Maintenance Website in English:
 - <http://en.china-cam.cn/>
 - Regulations and Policy
 - Maintenance Capabilities query
 - Notices and News
 - Questions and answers



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CAAC Maintenance Approval Regulation Article § 145.9,10,11,12,16

- “Maintenance Organization Certificate” page
 - The name and address of MRO together with the approved Maintenance Rating (s) are specified on this page.
- The CAAC MOC is not transferable.
- The CAAC MOC shall be displayed distinctly at main management office of MRO.
- The surrendered, suspended or revoked CAAC MOC shall be returned to CAAC within 5 calendar days. Otherwise, the CAAC will make an official announcement to declare the certain MOC concerned to be revoked.

Unless the CAAC MOC has been surrendered, suspended or revoked, the term of validity of the certificate will be governed as follows:

- The CAAC MOC issued to the domestic MROs remains valid continuously.
- The term of validity of the CAAC MOC issued to the foreign and regional MROs is 2 years maximum*.
- MRO shall submit the written application to apply for extending validity of MOC at least 6 months before the certificate expired.

The circumstances to issue the special approval

- One-off maintenance or maintenance in case of emergency.
- When it is so caused by CAAC that the concerned audit could not be accomplished within the predicted time frame.



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- ❑ MRO shall take appropriate corrective actions to rectify any non-compliance to CCAR-145 regulations in time, to ensure MRO complying with the regulations' requirements continuously.
- ❑ MRO shall inform the job senders (air operators or other MROs) the scope of work being approved by CAAC prior starting to perform maintenance/repair.
- ❑ MRO shall take appropriate corrective actions to rectify any non-compliance to CCAR-145 regulations in time, to ensure MRO complying with the regulations' requirements continuously.
- ❑ MRO shall inform the job senders (air operators or other MROs) the scope of work being approved by CAAC prior starting to perform maintenance/repair.
- ❑ MRO shall be responsible for ensuring the entire maintenance/repair working process meet the approved standards, as well as the subcontracted maintenance/repair works.

The following information need to be reported factually to CAAC Headquarter :

- Information prescribed in Attachment 4 of this regulation: Annual Report (F145-4).
- Information prescribed in Attachment 5 of this regulation: Un-airworthy Condition Report (F145-5).
- Other information regarding to the maintenance quality and un-safety issues required by CAAC Headquarter.

Requirements prod. & cert Regulation Article § 145.22, -21, AC121-58

□ CAAC Approved Product

Means the aviation products, which is in conformity with the Type Certification (TC) data approved or accepted by CAAC, manufactured by the CAAC approved product system under CCAR-21 or maintained by the CAAC approved MRO under CCAR-145.

□ Product accepted by CAAC

Means the accessories, components, etc. installed on the TC aviation products accepted by CAAC:

1. The accessories, components, etc. installed on the TC aviation products accepted by CAAC in accordance with CCAR part 21 & bilateral agreement, such accessories, components, etc. shall be listed on the relevant continual airworthiness documents of the TC aviation products.

Special Note:

Regarding the accessories, components, etc. which is accepted by CAAC in accordance with bilateral agreements but not listed on the continual airworthiness documents of the TC aviation products (e.g. FAA PMA) , only after other requirements of CAAC have been fully satisfied if applicable can such accessories, components, etc. be installed on the Chinese registered aircraft.

□ **The approved maintenance rating prescribed in the CCAR-145 is classified as follows:**

- Airframe
- Power plant
- Propeller
- Component other than complete engine/APU or propeller
- Specialized services
- Other maintenance ratings acceptable to the CAAC

□ **The classification of approved maintenance function prescribed in the CCAR-145.**

- Inspection/test
- Repair
- Modification
- Overhaul
- Line maintenance
- Scheduled maintenance
- Other maintenance functions acceptable to the CAAC

Limitation on Power Plant rating



Why this topic needs to be addressed?

- The “Power plant” and “Engine/APU” are not clearly defined in the CCAR-145.
- Several MROs with power plant rating approval of CAAC performed the maintenance work beyond the approved working scope occasionally due to misunderstanding and incorrect interpretation of the relevant CAAC requirements.

- **Airworthiness Data**
- **Maintenance Facility**
- **Parts & Material**
- **Personnel**
- **Tool & Equipment**

□ **Airworthiness Data : The MRO shall keep the following documents related to the civil aircraft maintenance**

- The civil aviation regulation of the People's Republic of China, Civil Aviation Administration Procedure, Advisory Circulars, administration documents and other documents regarding the aircraft maintenance issued by the CAAC, including the relevant national standards quoted by the aforementioned documents.
- The MRO shall keep the master of the airworthiness data under centralized control, establish the relevant management procedure to control the airworthiness data effectively and ensure the distributed copies are identical to the master. An effective backup system shall be available while using computerized system to control airworthiness data.

□ **Maintenance Facility: MRO shall be provided with the appropriate.**

- Maintenance facilities
- Working environment
- Offices
- Training facilities
- Storage rooms

- **Airworthiness Data**
- **Maintenance Facility**
- **Parts & Material**
- **Personnel**
- **Tool & Equipment**

Note: The used material shall come with the Authorized Release Certificate/ Airworthiness Approval Tag as prescribed in the Attachment 7 of this regulation, issued by MRO approved by the CAAC in accordance with CCAR-145.

Parts & Material: The certificate of conformity of parts/material terms:

- Standard parts or raw material shall come with the Certificate of Approval or Certificate of Conformity.
- The brand new non-standard part or non-raw material shall come with the Airworthiness Approval Tag or Authorized Release Certificate issued by the manufacturer.
- The evaluation for parts/material suppliers and receiving inspection requirement under the quality system control shall be established by MRO to avoid unqualified parts/material being used in the maintenance work.
- The stored parts/material shall be properly marked, kept and distributed to avoid mixing up and damage, and ensuring the parts/material is in good conditions and to be used properly.

Personnel: MRO shall have sufficient number of employees for maintenance, certifying, management and supporting complied with the following requirements. MRO shall nominate at least an Accountable Manager, a Quality Manager and a Production Manager.

- The Accountable Manager shall be taken by the legal representative of MRO or the person being authorized according to the legal process.
- The Quality manager and Production Manager shall not be taken by one person concurrently.
- The aforementioned managing position shall not be taken by the Accountable Manager or Quality Manager or Production Manager transferred from MRO's MOC being revoked by CAAC.

- **Airworthiness Data**
- **Maintenance Facility**
- **Parts & Material**
- **Personnel**
- **Tool & Equipment**

- The maintenance, certifying, management personnel and supporting staff shall be physically healthy and competent for the assigned position. The valid proof of the physical examination issued by the legal medical organization every year for aforementioned personnel shall be available.
- The Accountable Manager, Quality Manager and Production Manager shall fulfill the following qualification requirements:
 - The management personnel of the foreign or regional MRO shall be able to interpret the requirements of this regulation correctly, and the qualification thereof shall be equivalent to that for the Maintenance Management Personnel Qualification Certificate.
- The managing and supporting staff who is involved in aircraft or component maintenance shall fulfill the following qualification requirements:
 - Have received training regarding to relevant regulations, national or industrial standards, technical knowledge, basic skill, working procedures and human factors.
 - The personnel assigned for quality, engineering and production control managing or supporting positions related to aircraft or component maintenance directly, shall obtain the civil aircraft maintenance personnel license or the civil aircraft component maintenance personnel license following CCAR Part 66's requirement.

- **Airworthiness Data**
- **Maintenance Facility**
- **Parts & Material**
- **Personnel**
- **Tool & Equipment**

- **Tools & Equipment:** MRO shall determine the tools and equipment necessary for the maintenance work according to the working scope specified in CAAC MOC and the relevant airworthiness data, and the following requirements for effective controlling and keeping of the tools and equipment need to be fulfilled to ensure they are in good and serviceable condition.
- MRO shall keep sufficient tools and equipment to ensure the relevant maintenance work could be resumed within short-term period in case of the tools and equipment got failure.
- MRO may use alternative tools and equipment equivalent to the one required or recommended in the relevant airworthiness data, but the equivalency need to be demonstrated and being approved or accepted by CAAC HQ.
- If the automatic test equipment was used for maintenance, the validity of the testing software shall be controlled.
- **MRO shall establish calibrate system for measuring tools or testing equipment.**
 - The calibration of the general measuring tool shall be traceable to the relevant national standards. Where there is no national standard available or the standard required by the manufacturer is stricter than the national standard, the calibration of such equipment shall be traceable to the manufacturers' standard.
 - The detailed records shall be available for tools and equipment calibration; such records shall be managed as part of maintenance records as well.

Management systems of MRO

□ Quality system

- The maintenance organization shall establish a quality system which is under the charge of the Accountable Manager. The quality system shall fulfill the following requirements.

- A clear quality management policy issued by the Accountable Manager to clarify the administrative responsibilities of each department and individual person. The responsibility of each department and individual person shall avoid duplication or overlapping.
- The MRO shall establish the qualification requirements for each post according to the duty and responsibility thereof, make evaluation on the competence of each post-holder, and grant the authorization in the written form to the person who's competent for such post. Authorization to the maintenance personnel may be issued by the Quality Manager or the person (s) so authorized. The authorization to the certifying staff shall only be issued by Accountable Manager or Quality Manager being authorized.
- MRO shall establish the quality management system that complies with the following requirements
 - a) The quality department shall be independent from the production control system and managed by the Quality Manager. Its primary function is to ensure the effective implementation of the quality management policy.
 - b) The Quality Manager shall be directly responsible to the Accountable Manager. Staff of the quality department shall execute the quality management function independently, and the responsibilities thereof shall not overlap those of the production control system. Staff of the quality department shall have a veto regarding the quality of the maintenance work.
 - c) The Quality Manager may report directly to the CAAC Headquarter for the circumstances deemed affect to the airworthiness of aircraft or components directly.

Management systems of MRO

☐ Internal Quality Audit System

- ☐ MRO shall establish an independent self-quality audit system that complies with the following requirements, or empower the quality department with the function to assess the compliance of the maintenance work with the requirements of CCAR-145 regulations, verify the effectiveness of the quality management system and make self-improvements.

- The audit report shall include the following information as minimum:

- ☐ The department or system being audited
- ☐ The date of audit
- ☐ The responsible auditor
- ☐ The audit findings
- ☐ The corrective actions so required
- ☐ The corrective actions to be taken
- ☐ The verification of corrective actions

- The audit interval for any department or system of MRO **shall not exceed 12 months**. For the department or system with more findings or if the serious problem occurred during the previous audits, the audit frequency for such department or system shall be appropriately increased.

Management systems of MRO

❑ Engineering & technical System

❑ MRO shall establish the engineering and technical system to fulfill the engineering and technical management responsibilities, including the compilation of following maintenance technical documents.

1. MRO shall follow the requirements of the relevant airworthiness data as well as that of the "job sender" to set up the maintenance worksheets. Worksheets may be established by MRO itself or provided by the "job sender", and shall define the working sequence and process.
2. MRO shall fulfill the following requirements to establish the basic maintenance documents pursuant to the relevant airworthiness data.
 - ***The basic maintenance document for the maintenance work means the technical document defining the methods and the standards to perform the specific maintenance work.***
 - The information of the relevant airworthiness data may be quoted directly in such document in the case that the information of the relevant airworthiness data has already been verified as applicable and can be understood correctly by the maintenance personnel.

Note 1:

The standards and means to perform the particular maintenance work specified in the working process of the worksheet shall address the relevant cross reference to the basic maintenance document if applicable. There may be more than one reference required for a worksheet.

Note 2:

If the airworthiness data from manufacturer was not available and the technical document developed by MRO was used as the basic maintenance document, such document can not be used as airworthiness data unless that had been reviewed and approved by the CAAC airworthiness certification department.

Note 3:

The alternative tools, equipment and material specified in the basic maintenance document refer to such alternative tools, equipment and material had been approved by CAAC.

Management systems of MRO

☐ Engineering & technical System

- The basic maintenance document shall be approved by the engineers authorized by the Accountable Manager prior using, such authorized personnel or posts shall be clearly specified in MOM.
- MRO shall keep one master copy of basic maintenance document. The records of initial and revision approval as well as evaluation of the influence of the revision of relevant airworthiness data on basic maintenance document shall be kept.

☐ Worksheet

- MRO shall set up the worksheet used to record working sequence and process regarding each step from receiving to final release of aviation products. The worksheet so developed can be in complete set or several different sections, the following information shall be included as a minimum:
 - ☐ Name of MRO
 - ☐ Worksheet identification number
 - ☐ Name or subject of maintenance work
 - ☐ Basic maintenance document and revision number thereof
 - ☐ Aircraft registration number or component part number
 - ☐ Content and records of maintenance work according to the prescribed working sequence and process
 - ☐ Autographic signature or stamp of the responsible worker
 - ☐ Date of initial establishment and revision
 - ☐ Record of working man-hours
 - ☐ Date of completion

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Management systems of MRO

❑ Production Control System

- ❑ The MRO shall fulfill the following requirements to establish a production control system consisting of all associated production departments and maintenance workshops.
 1. The production control system shall ensure that the facilities, tools/equipment, material, qualified maintenance personnel, airworthiness data and technical document necessary for the maintenance work are available prior to the maintenance work.
 2. The maintenance schedule arranged by the production control system shall match the maintenance man-hours available at that time. The maintenance man-hours available shall be defined according to the competence of maintenance personnel, shift arrangement, etc.
 3. If it may adversely affect the safety or quality of the maintenance while carrying out some maintenance working process simultaneously, the production control system shall arrange the working process appropriately to avoid such situations occurring. When the maintenance in process has to be suspended due to break time or shift handover, etc. the production control system shall control the working process and the maintenance records to ensure the continuity of the maintenance work.
 4. The production control system shall establish the maintenance man-hours control over each piece of maintenance work. The MRO shall record the actual maintenance man-hours and compare it with the theoretical man-hours to ensure the integrity of the maintenance work.
 5. The maintenance man-hours shall be measured in the unit of man per hour.

Management systems of MRO

□ Training System

- MRO shall establish the training program for each post pursuant to the requirements as prescribed in the §145.23 of this regulation, set up the technical record for each post-holder and fulfill the following requirements.
- The purpose of the training requirement is for “Capability” or “Competency”.
- The proper initial and recurrent training to ensure persons are capable of performing the assigned tasks are necessary.
- The training program shall define the scope of training, the objective of training, training time requirement, the means of training, examination requirement, training organization and training management responsibility, etc. The training program and any amendment thereof shall be approved by the CAAC Headquarter.
- Each post-holder of MRO shall complete the training on the training items as required in the training program and be appropriately qualified before undertaking the maintenance task or maintenance management or supporting work independently, and shall complete the following recurrent or continuation training.
- Recurrent or continuation training.
 - Receiving the recurrent training on amendments or changes made to the relevant civil aviation laws and regulations, national or industrial standards, technical knowledge, working procedures and maintenance human factors if applicable, and the continuation training regarding to the assigned job every two years at least.
 - Maintenance personnel who have broke off certain job more than two years, shall complete all training required in the training program before resuming to work.

Management System requirements

Management systems of MRO

□ Training System

Note:

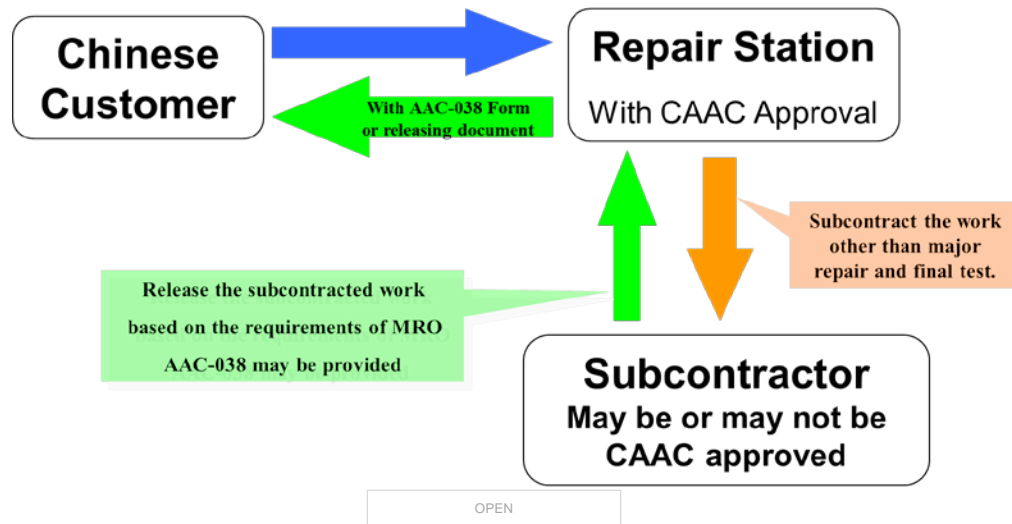
- *The training for MRO's employees other than the aforementioned personnel can follow the relevant requirements of the local NAA.*
- *If the training couldn't be implemented properly or the fact shows the person is not capable to perform the task due to in-adequate training, CAAC will require MRO to take actions to rectify, i.e. increasing the depth of training, or change the scope of training, etc.*

- ❑ Maintenance Document: Performing the maintenance work pursuant to the basic maintenance document that complies with the requirements, standards etc, as specified in the airworthiness data.
- ❑ Maintenance exceeding Airworthiness Data: MRO shall inform the air operator if the maintenance work being performed pursuant to the standards exceeding these prescribed in the airworthiness data. The data, process and instruction for such maintenance work or modification so developed shall be approved by CAAC Headquarter via the operator prior the maintenance work or modification.
- ❑ Tools & Equipment: Measuring tools / Complicated equipment comply with the requirements prescribed in the airworthiness data and technical documents and operating instructions.
- ❑ Parts and Raw materials: The parts and raw materials being used for the maintenance or repair shall be came with the valid certificates of conformity, or, authorized release certificate airworthiness approval tag, and be in good and serviceable condition.
- ❑ Authorized Staff: employee being involved shall be consistent and authorized. apprentice and unauthorized staff shall work under the supervision.
- ❑ Human Factors: *Ensure that the maintenance staff are not disturbed by psychoactive substances such as drugs, alcohol, etc. during the working time. Consider the impacts of the maintenance human factors during maintenance.*
- ❑ Working Hours: Maintenance personnel direct working on the aircraft or component should not exceed *8 hours* per day, the total working hours per week should not exceed *40 hours*. But *3 hours* overtime in maximum per day, and the total overtime per month should not exceed *36 hours*.
- ❑ Work Records: The status of the maintenance work shall be recorded for each step soon after the completion to ensure the continuity and integrity of the maintenance work.
- ❑ FOD Prevention: The proper preventive actions shall be taken to avoid the foreign objects being left on the aircraft or in the components.

- **Precondition**
 - The maintenance work subcontracted by the MRO must be within the scope of CAAC approval.
 - All subcontracted items as well as subcontractors must be approved or accepted by CAAC.
 - The foreign or regional MRO shall take the responsibility not only for ensuring that the in-house maintenance work meets the approved standards, but also for ensuring that the subcontracted maintenance meets the approved standards.
- **Requirement and limitation**
 - Any maintenance work to determine the final airworthiness status of the product being repaired shall not be subcontracted out.
 - The major part of maintenance or repair work,
 - Final test, certifying and
 - Releasing of maintenance
 - *Special note: if the repaired sub-part is certified and released individually, only the maintenance organization perform the major part of maintenance work, final test, certifying and releasing of maintenance can issue the releasing certificate in accordance with CAAC requirements and return it back to service. The following cases will be accepted by CAAC.*
 - *The major part of maintenance work, final test, certifying and releasing of the repaired sub-part is performed by the MRO itself.*
 - *If the maintenance work of the sub-part is contracted to a CAAC approved third-party MRO, the MRO shall perform the maintenance work in accordance with the standards approved or accepted by CAAC, and issue the release certificate for it back to service in accordance with the relevant CAAC requirements.*

Requirement and limitation

- The subcontractor of the foreign or regional maintenance organization shall be approved by the competent National Aviation Authorities.
- The MRO, who's going to subcontract the work, shall clarify the scope of the work, the requirements on the standard, maintenance record and release certificate, etc. to the subcontractor, and perform the inspection on the repaired product as well as the documents to ensure that the subcontracted maintenance work meet the relevant requirements as required by the contractor.
- The MRO, who's going to subcontract the work, shall evaluate on the subcontracted maintenance work under its quality system control. *The contractor shall cover all subcontractors and subcontracted works in its annual internal audit schedule, and perform the audit timely and effectively.*





The integrity requirements of maintenance record

- The maintenance work shall be performed in such a way that the integrity of the maintenance records can be ensured. The maintenance records including at least the completed **worksheets, records of defects findings and rectifications, components changing record and the associated certificates thereof, the list of AD and SB completed, deferred items, testing records, maintenance release document, etc.**
- The maintenance records may be completed in either paper or computerized documents format.
- For paper documents, the paper being used shall insure withstand normal handling and be in good condition during the transfer and preservation.
- For computerized records, the effective transmission of the information shall be ensured, **and the computerized records system accessed by authorization control for the certain people shall be established.**
- The maintenance records may be completed in either paper or computerized documents format.
- For paper documents, the paper being used shall insure withstand normal handling and be in good condition during the transfer and preservation.
- For computerized records, the effective transmission of the information shall be ensured, **and the computerized records system accessed by authorization control for the certain people shall be established.**
- When the operation of the MRO terminates, the maintenance records **within two years prior to the termination** shall be returned to the relevant “job sender”.

- ❑ Once the maintenance work was completed for aircrafts or aircraft components, the maintenance release document shall be issued by the certifying staff in a certain way being approved or recognized by the CAAC.
- ❑ The maintenance release document approved or accepted by the CAAC are as follows:
 - The subject of the maintenance job, the significant defects being found and the actions being taken, together with the list of parts being replaced, deferred items and the completed airworthiness directives (AD), service bulletins (SB) if applicable, and other additional works incorporated with the maintenance job.
 - The statement of compliance regarding to all maintenance works concerned had been done in accordance with the requirements of the CAAC regulations.
 - The name, license number and the autographic signature of the certifying staff as well as the releasing date.
- ❑ The release of aircraft components shall be in the form of the Release Certificate/Airworthiness Approval Tag (Form AAC-038) issued by the certifying staff authorized by MRO.
- ❑ The maintenance organization may make adjustments on the maintenance release document under the specific circumstance to ensure the information is complete; such adjustments, however, shall not change the information specified in the document.
- ❑ The usage of the maintenance release document shall not lead to confusion on the airworthiness of aircraft or aircraft component.
- ❑ The copy of the maintenance release document shall be kept together with the maintenance records.

Note: The special approval is normally required to be attached with the releasing document.

- **The requirement on the content and timeframe of the report**
 - The MRO shall report the concerned significant defects to CAAC Headquarter *within 72 hours*: Un-airworthy conditions or other important incidents being found during the maintenance that affect the aircraft operation safety as well as the airworthiness of the aircraft or components.
 - The significant defect or malfunction of the aircraft or component which being occurred due to maintenance errors.
 - The un-airworthy conditions shall be reported with the "Un-airworthy Condition Report" (Form F145-5).
 - The un-airworthy conditions shall be reported to the "job-sender" at the same time.
 - The MRO shall report the concerned significant defects to CAAC Headquarter *within 72 hours*: Un-airworthy conditions or other important incidents being found during the maintenance that affect the aircraft operation safety as well as the airworthiness of the aircraft or components.
 - Any emergency system that failed the operational check or functional test.
 - The significant defect or malfunction of the aircraft or component which being occurred due to maintenance errors.

- ❑ The MRO shall develop the manuals to define how to comply with the requirements of CCAR-145.
- ❑ The Maintenance Organization Manual (MOM) shall consist of Maintenance Management Manual (MMM) and the Working Procedures Manual (WPM).
- ❑ **Maintenance Management Manual (MMM) & Working Procedures Manual (WPM).**
 - The MMM defines the general policy and requirements to perform maintenance, and MMM need to be approved by CAAC.
 - The WPM defines the specific working procedures of each individual department or workshop according to the requirements as defined in MMM, and WPM shall be accepted by the CAAC.

- **PART 1-The Statement of the Accountable Manager.**

The statement signed by the Accountable Manager to declare that the MMM and the WPM has been verified in the compliance with the requirements of CCAR-145 and will be complied with the requirements of CAAC regulations constantly.

- **PART 2- Amendment and Distribution**

Amendment & distribution procedure of the MMM and the WPM.

- **PART 3- Facilities**

Note:

1. *Layout of the maintenance facility shall reflect the relationship between different facilities locations, it can be in one floor plan or more.*
2. *The MRO is required to address the issues regarding the maintenance facility as specified in AC-145-5, the MRO may also address the issues which are applicable upon its own situation.*

■ PART 4- Personnel

The total number of employees, the number of maintenance personnel, authorized staff and auditors involved in the approved maintenance work shall be addressed. The MRO may update the aforementioned numbers in one year cycle if there is any change.

■ PART 5- Organization

The organization chart and the description thereof that shall be able to indicate the relationships among the departments/systems.

Note:

1. *The MRO shall address the issues as required in this part upon its own Situation.*
2. *The key point of the organization chart is to show that the quality manager is responsible to the accountable manager directly and separated from production. The location of basic management elements as required by CCAR-145 needs to be shown in the organization chart also.*
3. *The independence of the internal quality audit department shall be clearly shown in the organization chart of the quality management system, the quality audit department shall not be assigned with any direct management duties and responsibilities.*
4. *It shall be specifically addressed if different basic management elements as required by CCAR-145 are covered under only one department/system.*

■ PART 6- Senior Management Personnel

The name, qualification, experience, duties and responsibilities of the Accountable Manager, Quality Manager and Production Manager.

Note:

1. *The MRO shall address the name, working experience, duties and responsibilities of the senior management personnel as prescribed in CCAR-145 upon its own situation.*

■ PART 7- Duties and Responsibilities

The description of the duties and responsibilities assigned to each department and each post.

Note:

1. *The MRO shall address the issues as required by AC-145-5 upon its own situation.*
2. *The duties and responsibilities of different department shall avoid to be overlapped.*
3. *The internal duties and responsibilities within one department can be addressed in the WPM.*
4. *The duties and responsibilities of other departments not related to the approved maintenance work is not required to be addressed in the manual.*

■ PART 8- Scope of Work

The description of the capability to perform the maintenance work which is within the working scope specified on the CAAC MOC.

Note:

1. *The copy of CAAC MOC must be valid.*
2. *The maintenance items and functions listed in the scope of work shall be within the working scope specified on the CAAC MOC, i.e. specifically clarify the approved scope of work in detail.*
3. *Where there is no supplemental detailed specification addressed regarding the approved scope of work or such supplemental specification is not approved, the MRO can only perform the maintenance work pursuant to the instructions as prescribed in OEM's airworthiness data as well as the approved maintenance ratings and items at the approved locations specified on the CAAC MOC.*

■ PART 9- Management Requirements

- **The technical documents management requirements.**
including the management requirements for the airworthiness data, and the worksheets and the basic maintenance documents developed by MRO.
- **Staff training management requirements**
- **Tools & equipment management requirements**
- **Material management requirements**
- **Production control requirements**
- **Subcontract items and subcontractors management requirements**
- **Maintenance recording and reporting requirements**
- **The quality control requirements for the complete maintenance process from receiving to final releasing of the maintenance work.**

Note:

1. *The MRO shall address all the issues pursuant to the requirements as specified in AC1-45-05 upon its own situation, but all the management issues thereof shall be covered.*
2. *The basic management policies is only required to be listed in the MOM, the detailed procedures and requirements can be addressed in WPM. The cross reference between the management policies and detailed procedures shall be shown on the manual.*

- **PART 10- Internal quality audit requirements**
- **PART 11 - The roster of the certifying staff and samples of the autographic signature or stamp of the certifying staff.**

Note:

Regarding the roster of certifying staff might be changed frequently, the roster can be controlled separately as a attachment of the manual, but it shall be clearly addressed and approved by CAAC.

- **PART 12 - List of subcontractors and subcontract items**

Note:

Regarding the subcontractor list might be changed frequently, the list can be controlled separately as a attachment of the manual, but it shall be clearly addressed and will be reviewed by CAAC.

- **PART 13 - Samples of the forms and tags used by MRO**

Note:

1. *Only the forms and tags as prescribed in CCAR-145 and MOM is required to be listed, other forms and tags required during the working process can be listed in WPM.*
2. *The MRO may develop the completion and operation instructions for the forms and tags by itself other than these prescribed in CCAR-145.*

■ **PART 14 - The statement of compliance to CCAR-145**

Note:

1. *The declaration of compliance for CCAR-145 Article 1 to Article12, Article 14, Article16 to Article19. Article35 to Article39 is not required.*
2. *Entering “comply” when fully comply with the relevant requirements. Entering “Non-comply” when fully against the relevant requirements and specifying the equivalent safety measures thereof. Entering “partially comply” when only part of the relevant requirements are satisfied and specifying the equivalent safety measures thereof.*
3. *Fill in “Non” if not applicable*

□ **The Working Procedures Manual shall include the following applicable subjects at least**

- The basis
- Applicability
- Qualification requirement for each post
- Necessary tools/equipment and material
- Working or operating procedures
- Working standards
- Maintenance recording requirements
- Samples of the forms and tags to be used
- Revision
- Distribution

☐ **Applicable Circumstances**

- For the small size MRO or the MRO that only provides special service or line maintenance service.
 - ☐ The posts and responsibilities of Accountable Manager, Quality Manager and Production Manager may be taken by one person.
 - ☐ The CAAC MOM and the WPM may be integrated into one volume.
 - ☐ The internal quality audits may be contracted out to the approved third-party organization, which shall provide copies of the audit reports to CAAC.
- For the manufacturer's MRO, the separate production control system may not required if the production control system in use can fulfill the requirements of CCAR-145, but such situation shall be clearly addressed in the CAAC MOM.
- Any other equivalent means of compliance acceptable by CAAC Headquarter.

Follow Up

- Any related questions please contact the quality department.
- All CAAC-145 documents are available within Qpulse.
- Complete all training required documents and forward to HR to be added into your training records.