

# **China Civil Aviation Regulation (CCAR)**

# **Part 145**

# Certification Rules on Civil Aircraft Maintenance Organization

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# Order of Ministry of Transport of the People's Republic of China

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*Certification Rules on Civil Aircraft Maintenance Organization*, which has been adopted at the 4<sup>th</sup> ministerial meeting on February 8, 2022, is hereby promulgated and shall enter into force as of July 1, 2022.

By Minister: LI XiaoPeng

February 11, 2022

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# **Chapter I General**

#### § 145.1 Purpose and Basis

This regulation is formulated in accordance with *Civil Aviation Law of the People's Republic of China*, the *Administrative Permission Law of the People's Republic of China* and *Airworthiness Management Rule for Civil Aircraft of the People's Republic of China*. It is for the purpose of standardizing the administration and supervision of civil aircraft maintenance organization and to ensure the continuing airworthiness and flight safety of civil aircrafts.

#### § 145.2 Scope of Application

This regulation applies to certification, supervision and administration of maintenance organization (hereinafter referred to as MO) that has obtained the Civil Aircraft Maintenance Organization Certificate (hereinafter referred to as MOC).

The aforementioned MO includes the independent MO and the operator's MO. The independent MO may include the domestic MO and the foreign MO.

#### § 145.3 Administrative Department

The Civil Aviation Administration of China (hereinafter referred to as the CAAC) is responsible for the unified administration of the MOC, as well as the certification, supervision and administration of foreign MO.

The Regional Administration of CAAC (hereinafter referred as CAAC RA) entrusted by the CAAC, is responsible for the certification, supervision and administration of the domestic MO and operators' MO whose main offices and maintenance facilities are located within its jurisdiction.

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# Chapter II Application, Issuance and Administration of Maintenance Organization Certificate

#### § 145.4 Applicant

An applicant for a MOC shall meet the following conditions:

- (a) The applicant is a legal entity established pursuant to the law, and has basic conditions such as maintenance facilities, technicians, and quality management systems for the maintenance rating(s)/item(s) being applied.
- (b) The maintenance rating(s)/item(s) that a foreign applicant applies for CAAC approval shall be in support of maintenance being performed to China registered civil aircraft or components thereof.

#### § 145.5 Application Materials

To apply for a MOC, the applicant shall submit the following documents in accordance with the format and manner prescribed by the CAAC, and be responsible for the authenticity of the documents.

- (a) Application Letter.
- (b) Training Program Manual (hereinafter referred to as the TPM) in accordance with § 145.27 of this regulation and Maintenance Organization Manual (hereinafter referred to as the MOM) developed in accordance with the § 145.28.
- (c) Compliance statement to this regulation, including relevant supporting documents.
- (d) The foreign applicant shall submit a Letter of Intent (hereinafter referred to as the LOI) from the Chinese customer requesting related maintenance services.

The domestic applicant shall submit application documents in Chinese, and the foreign applicant may submit application documents in Chinese or in English.

#### § 145.6 Acceptance and Audit

Once the application documents are received, the authority will notify the applicant in writing within 5 working days whether the application is accepted. In case the application documents are unacceptable, the authority will notify the applicant all the documents required to supplement or correct on the spot or within the 5 working days at one time.

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After accepting the application, the authority will consult with the applicant in writing or in person to determine the date of on-site audit.

#### § 145.7 Approval

For applications that meet the requirements and have paid the audit fees, the authority will issue a MOC to the applicant within 20 working days from the date of accepting the application, however, time for validation pursuant to the law is not included in the aforementioned period. If the MOC cannot be issued within 20 working days, the issuance can be extended for 10 working days with the approval of the person in charge of the administrations, but the applicant will be informed of the reason for such extension.

#### § 145.8 Recognition

The CAAC may recognize the MO and its maintenance capabilities in the following circumstances:

- (a) The CAAC validates the MO approved by Civil Aviation Department of Hong Kong (HKCAD) and Civil Aviation Authority of Macao (AACM) pursuant to the cooperation arrangement between the CAAC, HKCAD and AACM.
- (b) The CAAC recognizes the MO approved by the civil aviation authorities of other countries or regions pursuant to the agreements signed by the CAAC and the country or region.

#### § 145.9 Maintenance Organization Certificate

The MOC consists of the "Maintenance Organization Certificate" page and the "Limitation of Maintenance Items" page. The name and address of the MO together with the approved Maintenance Ratings are specified on the "Maintenance Organization Certificate" page, whereas the limited approved Maintenance Items are specified on the "Limitation of Maintenance Items" page.

The MOC shall not be transferable, lent, leased or altered.

The MOC shall be prominently displayed at the main office of the MO.

#### § 145.10 Validity of Maintenance Organization Certificate

The MOC is valid for 3 years from the date of issuance. The MO can apply for the renewal of the validity period, but it shall submit a written application to the Authority for such renewal at least 6 months before the expiration, and submit the application documents stipulated by the Authority. The application acceptance, audit and approval processes are the same as those of

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the initial application. Each renewal shall be valid for a maximum period of 3 years. The application after the expiration date will be deemed as the initial application.

If the MO no longer has the conditions for safe production, the Authority will revoke its MOC.

In case of any of the following circumstances, the Authority will conduct the cancellation process of the MOC:

- (a) The maintenance permit is revoked in accordance with the law, or the MOC is revoked in accordance with the law.
- (b) The MO is terminated in accordance with law.
- (c) Other circumstances regulated by laws or administrative regulations where administrative licenses shall be revoked.

#### § 145.11 Application for Change

The MO shall submit a written application to the authority to change the MOC at least 60 days in advance when its name, address, or maintenance rating(s)/item(s) are changed. The process of acceptance, audit and approval processes are the same as the initial application.

The MO shall report to the authority in advance when there is any major change to the facility, personnel, organization, scope of work or management requirements, etc., and modify the MOM as requested in the § 145.28 of this regulation in time.

#### § 145.12 Rights of Maintenance Organization

The MO is granted the following rights after obtaining the MOC:

- (a) Pursuant to the maintenance contract/agreement, performing the maintenance of the civil aircraft or aircraft components within the approved scope of work as specified in the MOC;
- (b) May provide support in the case of emergency or simple aftermarket service at locations other than those specified in the MOC. Excepting the aforementioned circumstances, the MO may perform maintenance work within the approved scope of work on one-time or short-term basis at locations other than those specified in the MOC only when the procedure specifying how to comply with the requirements as prescribed in chapter IV of this regulation has been addressed in the MOM, and it's obtained Authority approval.
- (c) The MO may authorize certifying staff to issue maintenance release certificate for the maintenance work completed according to the relevant Airworthiness Requirements.

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#### § 145.13 Obligation of Maintenance Organization

The MO shall at all times keep the organization in compliance with the requirements of this regulation and carry out management in accordance with the approved MOM by taking appropriate corrective actions to rectify any defects and deficiencies if any.

The MO must ensure that the maintenance of civil aircraft or aircraft components are performed up to the level required by the corresponding Airworthiness Requirements. When the maintenance requested by the job sender cannot meet the requirement of corresponding Airworthiness Requirements, the MO shall inform the "job sender" of the actual situation, and shall not issue a maintenance release certificate.

The MO which uses subcontractors without the MOC as prescribed in §145.14, shall take full responsibility for ensuring that the subcontracted maintenance work meets the requirements of corresponding Airworthiness Requirements.

The MO shall truthfully report the following information to the:

- (a) Annual report on the organization's maintenance of aircraft or aircraft components in accordance with this regulation.
- (b) Defects or un-airworthy conditions descripted in § 145.32 of this regulation.
- (c) Other information related to maintenance quality and investigation of aircraft incidents requested by the Authority.

The MO shall cooperate with the review, supervision and investigation.

#### § 145.14 Subcontract

Except for major part of the maintenance, final test and releasing of maintenance, the MO may subcontract some highly specialized processes or sub-component maintenance in the scope of the work limited in its MOC to the organization which meets CAAC requirements.

The MO which uses the subcontractors, shall establish an evaluation procedure under the control of its quality system.

#### § 145.15 Equivalent Means of Compliance

If the size of the MO is small or in other special circumstances, and on the premise of ensuring the same safety of the civil aircraft or its components to be maintained, the MO may propose the following equivalent compliance means to the regarding certain provisions of this regulation:

(a) For the small size MO or the MO that only provides specialized operation or line

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maintenance work, its Accountable Manager, Quality Manager and Production Manager may be the same person; its MOM and Work Procedure Manual (WPM) may be combined.

- (b) For the MO with multiple maintenance locations, if it can establish an effective unified management and manual system, a single MOC can be issued with the maintenance capability of each location specified on the MOC.
- (c) Line maintenance at locations other than the base or sub-base of aircraft operator's MO may not be limited, it can be self-managed through its' management system.
- (d) Any other equivalent means of compliance accepted by the Authority.

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# **Chapter III Maintenance Categories**

#### § 145.16 Classification of Maintenance Function

Maintenance functions of this regulation, are classified as follows:

- (a) 'Inspection/Test': Verifying serviceability of removed civil aircraft components without disassembling by examination and functional check in accordance with the standards specified in Airworthiness Requirements.
- (b) **'Repair':** The restoration of the civil aircraft or aircraft component to an airworthy condition in accordance with the standards specified in the appropriate airworthiness requirements after it has been damaged or subjected to wear.
- (c) 'Modification': The various design changes performed on civil aircraft or components according to the requirements of corresponding Airworthiness Requirements. Modifications hereby do not include approval of contents involved in design changes.
- (d) 'Overhaul': The restoration of the civil aircraft or aircraft component, by disassembling, cleaning, inspecting, performing the necessary repairs or replacements, reassembling and testing in accordance with the standards specified in corresponding Airworthiness Requirements, to its serviceable life or airworthy conditions.
- (e) **'Line maintenance':** Routine inspections, the rectification of malfunctions and defects encountered during line operation of civil aircraft according to the requirements of corresponding Airworthiness Requirements. For the purpose of this regulation, the following services fall outside the scope of line maintenance:
- (1) Civil aircraft arrival and departure marshalling, parking, pushing out, towing, wheel chocking, and fitting and removal of the protection devices;
- (2) Connect ground power and pneumatic supplies; water servicing (fill and drain); fueling and de-fueling; air and oxygen charging;
- (3) Necessary cleaning; de-icing and removal of snow and frost;
- (4) Other necessary servicing work.
- (f) **'Scheduled maintenance'**: Inspections and repairs of civil aircraft or aircraft components, which have been in service to a defined time limit, according to requirements of corresponding Airworthiness Requirements. The Scheduled Maintenance applies to airframe and engine, and

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it doesn't include "overhaul".

#### (g) Other maintenance functions.

#### § 145.17 Maintenance Rating

Maintenance ratings, in the context of this regulation, are classified as follows:

- (a) Airframe
- (b) Engine
- (c) Propeller
- (d) Components other than complete engine or propeller.

The maintenance ratings of airframe, engine and propeller may include maintenance on their respective components which are fitted or removed. For such components which are removed and not bound for re-installation on the airframe, engine or propeller that is under maintenance, the MO shall submit the application to the Authority to apply for the maintenance rating of the component other than the complete engine or propeller.

The Authority may specify and clarify the above maintenance ratings according to the specific situation.

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# Chapter IV Basic Conditions and Management Requirements of Maintenance Organization

#### § 145.18 Facility

The MO shall have appropriate working environment and maintenance facilities, office, training and storage facilities that comply with the following requirements:

- (a) The facilities shall fulfill the needs of performing the maintenance work, which is within the approved scope of work as specified in the MOC, as well as protecting the maintenance work from being affected by meteorological environmental factors. The facilities required shall also meet the following requirements:
- (1) With the exception of line maintenance, the hangar of the MO with the approval of airframe rating shall be large enough to accommodate the approved maintenance rating(s)/item(s). While the aircraft hangar is rented, the MO shall provide valid proof of tenancy. For other approved maintenance rating(s)/item(s), workshops with enough room appropriate for the maintenance work shall be available. The aircraft hangar and workshop shall be equipped with hoisting and access equipment appropriate for the intended maintenance work.
- (2) The MO shall ensure that the aircraft hangar and workshop can effectively protect the maintenance work from being affected by local weather elements, such as rain, snow, ice, hail, wind, dust etc. foreseen throughout the year. Although an aircraft hangar is not necessary for some maintenance work of the approved airframe rating(s), the MO shall also ensure that such maintenance work can be protected from being affected by all kinds of weather elements.
- (b) The working environment shall be appropriate for the intended maintenance work and comply with the following requirements:
- (1) Appropriate temperature and humidity control in aircraft hangar and workshop shall be available to ensure the quality of maintenance work and the effectiveness of maintenance personnel. Effective measures for dust prevention shall be taken in the working area.
- (2) The aircraft hangar and workshop shall be equipped with water, electricity and pneumatic supplies appropriate for the intended maintenance work. The lighting shall be such that effectiveness of each inspection and maintenance works can be ensured.
- (3) Noise shall be controlled to a level to prevent the maintenance personnel from being distracted from carrying out the relevant maintenance work. Where it is impractical to control

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the noise, the maintenance personnel shall be provided with the necessary protection devices.

- (4) Working environment shall be appropriate for the intended maintenance work. Where maintenance work could not be performed due to the factors such as temperature, humidity, rain, snow, ice, hail, wind, light, dust contamination etc., the maintenance work shall be stopped immediately and suspended until the normal working environment can be resumed.
- (5) For the maintenance work under the special working environment such as electrostatic sensitive, radiation, dust, or potential hazards which may cause injury to the maintenance personnel, etc., the effective control, protection devices and first aid equipment required shall be provided. For the maintenance work to be carried out above the ground more than 2 meters high, the fall-protection devices required shall be provided.
- (c) The office shall comply with the following requirements:
- (1) Ensuring that the maintenance work can be effectively performed, and standardization of administration can be achieved.
- (2) Administration staff may be accommodated in the same office provided that there is sufficient room and necessary segregation.
- (3) Provisions for the maintenance personnel to consult the relevant documents and complete maintenance records shall be available. For line maintenance, an appropriate resting area shall be provided for the maintenance personnel required to work continuously. The resting area required shall be as close as feasible to the working site to prevent fatigue to the maintenance personnel.
- (d) Training facility shall meet the training requirements. The MO shall submit valid proof of tenancy to the Authority when the training facility is rented.
- (e) Appropriate facilities for storage of tools and equipment, materials, Airworthiness Requirements and maintenance records shall be available. The storage facility shall meet the following storage requirements appropriate for the stored objects:
- (1) The storage of tools and equipment shall ensure the safekeeping of the tools and equipment to prevent inadvertent damage. The storage of special tools shall meet the requirements of the manufacturer.
- (2) Facilities for material storage shall ensure the safekeeping of the stored material. The storage of serviceable and unserviceable parts shall be segregated. The storage environment shall meet the requirements of cleanliness, ventilation, temperature and humidity. The storage

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of special material shall meet the requirements of the manufacturer.

- (3) The storage facility for Airworthiness Requirements shall ensure the safekeeping of the master copy of all Airworthiness Requirements. The storage facility for the internal distributed copies of the Airworthiness Requirements shall ensure easy access by the users and adequate segregation from the "For Reference Only" documents.
- (4) The storage facility for maintenance records shall protect the records from being affected by unsafe issues such as water, fire, loss, unauthorized alteration, etc.

#### § 145.19 Tools & Equipment

The MO shall have the tools and equipment necessary for the maintenance work according to the approved scope of work as specified in the MOC and the relevant Airworthiness Requirements, and fulfill the following requirements to effectively control and keep the tools and equipment to ensure that the tools and equipment are in good and serviceable conditions:

- (a) The MO shall keep sufficient tools and equipment to ensure that the relevant maintenance work could be resumed in a reasonable short-term period in the case of failure of the tools and equipment which are used for maintenance work at that time.
- (b) The MO may use alternative tools and equipment with the same functions as those required or recommended in the relevant Airworthiness Requirements, but the MO should verify their equivalence to the Authority and obtain approval or acceptance before use.
- (c) The MO may borrow or lease certain special equipment that is rarely used or requires large investment, but the MO shall provide the Authority with the valid contract or agreement.
- (d) The MO shall set up the identification and register for each special tool & equipment, establish an effective control procedure over these tools and equipment to avoid the abnormal failure and loss, and to ensure the tools and equipment necessary for the maintenance work remain in serviceable condition.
- (e) The MO shall establish a calibration system for measurement tools or testing equipment, and shall not use unqualified measuring tool & equipment.

The calibration of tools and equipment shall have detailed records to be managed as part of the maintenance records. The calibration of tools and equipment can be Subcontracted, but its management and control responsibilities shall not be Subcontracted. The MO shall establish the following management system to prevent maintenance personnel from using tools and equipment beyond the calibration period for maintenance work.

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- (1) Retrieving procedure of the tools & equipment called for calibration.
- (2) Affixing the calibration label on the prominent position of the tool & equipment and requiring the maintenance personnel to verify whether tool & equipment are expired from the calibration due date prior to use.
- (3) Segregating procedure of the tools & equipment that are expired from the calibration due date or affixing secure warning labels to the tools & equipment that could not be segregated.
- (f) The requirements prescribed in the articles aforementioned also apply to personal tools if used.
- (g) In the case that the automatic test equipment is used for maintenance, the validity of the testing software shall be controlled.

#### § 145.20 Materials

The MO shall fulfill the following requirements to keep the material necessary for the intended maintenance work, and effectively control and manage it to ensure its conformity:

- (a) Material used for maintenance work shall comply with the requirements of the relevant Airworthiness Requirements. In the case of using the material from other organizations via contract/agreement, the MO shall keep the valid contract/agreement.
- (b) Material used by the MO shall bear the valid certificate of conformity. The receiving inspection system for incoming material shall be established within the MO to prevent material that is found with nonconformity or is unapproved from being used for maintenance. Unless specially approved by the Authority, the certificate of conformity of material may be in terms of the following:
- (1) Standard parts or raw material shall come with the Certificate of Approval or Certificate of Conformity.
- (2) 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.
- (3) Used material shall come with the Authorized Release Certificate/Airworthiness Approval Tag (Form AAC-038), issued by the MO approved by the Authority in accordance with this regulation.
- (c) The MO shall inform the operator about the factual situation in the case of using material provided by the suppliers which are not approved by the civil aircraft manufacturer, and acquire

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the approval from the Authority via the operator prior to the use.

- (d) An operator's MO may build small amount of in-house fabricated parts for its own internal maintenance purpose in accordance with the working procedure approved by the Authority. This case is only limited to the aircraft components that their malfunction, failure or defect will not result in any one of the conditions listed in the Item 2 of Section 21.5 of CCAR Part 21 *Certification of Civil Aviation Products and Parts*. The MO other than the operator's MO which builds the aforementioned in-house fabricated parts shall inform the operator about the factual situation and obtain the approval from the Authority via the operator prior to the use. The in-house fabricated parts shall not be sold.
- (e) The MO shall establish procedures for evaluation of the supplier and receiving inspection of incoming materials under the control of the quality system to prevent unqualified or source unidentified materials from being used in the maintenance work. An effective identification, storage and distribution procedure shall be established for the materials in stock, in order to prevent the materials from being mixed and damaged, and to ensure that the materials are in good condition and being used correctly.
- (f) For material with a shelf life, the MO shall establish effective measures to prevent the materials beyond the shelf life from being used in maintenance work.
- (g) For chemicals and materials subject to electrostatic protection requirement, effective measures shall be taken to safely protect the materials according to the manufacturer's requirements.
- (h) The MO shall establish a procedure to segregate unserviceable materials and destroy scrapped materials in order to prevent the unserviceable or scrapped materials from being used in maintenance work.

#### § 145.21 Personnel

The MO shall have sufficient maintenance and management personnel, certifying and supporting staff that complies with the following requirements:

(a) The MO shall appoint at least an Accountable Manager, a Quality Manager and a Production Manager. The Accountable Manager shall be the legal representative of the MO, or a person authorized by the legal representative; the title of Quality Manager cannot be concurrently held by the Production Manager. The above-mentioned personnel should be familiar with civil aircraft maintenance management regulations and have experience in maintenance management.

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- (b) The maintenance, management, certifying, and supporting staff shall be physically healthy and competent for the assigned duties and responsibilities.
- (c) The MO shall appoint an Accountable Manager, Quality Manager and Production Manager who meet the following criteria:
- (1) Be familiar with the regulations of the civil aircraft maintenance.
- (2) Be experienced in maintenance management.
- (3) The aforementioned personnel of the domestic MO shall obtain the aircraft maintenance personnel license issued by Authority.
- (4) The aforementioned personnel of the foreign or regional MOs shall hold the civil aircraft maintenance personnel license issued by competent Civil Aviation Authority of the country or region or meet the qualification requirements as stipulated by the competent Civil Aviation Authority of the country or region.
- (d) The MO shall use personnel who meet the following requirements as maintenance personnel directly engaged in the maintenance of civil aircraft or civil aircraft components:
- (1) Have received training on the relevant civil aviation laws and regulations, national or industrial standards, technical knowledge, basic skill, working procedures and maintenance human factors.
- (2) The maintenance personnel who engaged in maintenance work independently shall obtain authorization of specific work ratings/Items by the MO.
- (3) The Personnel engaged in Non-Destructive Testing and related work shall have the corresponding qualification level.
- (e) The MO shall use personnel who meet the following requirement as maintenance certifying staff:
- (1) Except the case prescribed in the item (3) § 145.15 of this regulation, the maintenance certifying staff shall be employed by the MO.
- (2) The maintenance certifying staff of the domestic MO shall obtain the civil aircraft maintenance personnel license issued by Authority, and their maintenance technical English level shall match the Airworthiness Requirements used. The certifying staff who release complex aircraft maintenance, shall have valid aircraft endorsement corresponding to the aircraft type.

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- (3) The maintenance certifying staff shall have rich maintenance experience in the release work corresponding to the civil aircraft or its components, among which the aircraft maintenance certifying staff shall have at least two years of relevant maintenance experience.
- (4) The maintenance certifying staff of the foreign MO shall meet the requirements of qualification prescribed by the competent Civil Aviation Authority of the country or the region, and the personnel shall obtain the maintenance personnel license issued by the competent Civil Aviation Authority of the country that in compliance with the International Civil Aviation Organization (ICAO) standards and recommended practices, and shall have ability to understand, speak, read and write in English.
- (5) The maintenance certifying staff shall obtain the authorization of the specific maintenance release ratings/items by the MO.
- (f) The MO shall use the personnel who meet the following requirements as the management and supporting staff engaged in relevant works to the civil aircraft or aircraft component maintenance work:
- (1) Have received training on the relevant civil aviation law and regulations, national or industrial standards, technical knowledge, working procedures and maintenance human factors.
- (2) The personnel of the domestic MO engaged in the quality, engineering and production control management directly related to the maintenance of civil aircraft or its components shall hold the civil aircraft maintenance personnel license issued by the Authority, and their maintenance technical English level shall match the Airworthiness Requirements used; the corresponding personnel of the foreign MO shall meet the qualification requirements stipulated by their National Civil Aviation Authorities of the country or region.

#### § 145.22 Airworthiness Requirements

- (a) The MO shall have the following Airworthiness Requirements when carrying out the civil aircraft maintenance:
- (1) The civil aviation regulations, Advisory Circulars, administration documents and other forms of documents regarding the civil aircraft maintenance issued by the Authority, including the relevant national standards quoted in the aforementioned documents.
- (2) The relevant Airworthiness Requirements prescribed by the civil aircraft or aircraft component manufacturer(s) which are necessary for the maintenance work, including all kinds of manuals, documents, Service Bulletins, Service Letters as well as the relevant international

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or industrial standards cited in the aforementioned documents.

- (3) The relevant Airworthiness Requirements provided by the "job sender" pursuant to the maintenance items specified in the maintenance contract, including the operator's maintenance program, manual and Job card, etc..
- (b) The MO shall establish effective control manner over the Airworthiness Requirements specified in item (a) above in the following ways to ensure the Airworthiness Requirements are valid and convenient for use:
- (1) Establish a set of procedure to centrally control the master copy of Airworthiness Requirements and effectively manage the Airworthiness Requirements, and ensure the distributed copies are consistent with the original copies. Where a computer system is used to save Airworthiness Requirements, an effective backup system shall be established.
- (2) The effectiveness of Airworthiness Requirements shall be validated through periodically obtaining the document index from the publisher of the documents or directly checking with the publisher. When using Airworthiness Requirements controlled by the 'job sender', the validity statement shall be obtained from the job sender before use.
- (3) The non-valid Airworthiness Requirements and other uncontrolled reference data shall be distinctively marked and segregated to avoid being mixed up with the valid and controlled Airworthiness Requirements.
- (4) Ensure that maintenance staff can obtain the required Airworthiness Requirements in a timely and convenient manner during the maintenance process, and necessary reading devices shall be provided.

#### § 145.23 Quality System

- (a) The MO shall establish a quality system under the responsibility of the Accountable Manager. The quality system shall fulfill the following requirements:
- (1) A clear quality management policy issued by the Accountable Manager, and the responsibilities of all departments and personnel are defined according to this management policy. Duplication and overlap of responsibilities of departments and personnel should be avoided.
- (2) The MO shall define the qualification requirements for each position according to the duties and responsibilities, establish evaluation system for the competence of each position, and authorize personnel who meet the qualification requirements in writing. The authorization of

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maintenance personnel can be signed by the quality manager or the person delegated by the quality manager; the authorization of the maintenance certifying staff shall be signed by the Accountable Manager or the Quality Manager delegated.

- (3) A complete record of authorization of various maintenance personnel should be kept in the quality department, and relevant authorization information should be available at the relevant working area.
- (4) Establish necessary working procedures and define the duties and responsibilities of each department and individual post. The working procedures shall cover all the applicable requirements of this regulation. The establishment and amendment of such working procedures shall be approved by the Accountable Manager or the Quality Manager delegated.
- (b) The MO shall establish the quality management procedure that meets with the following requirements:
- (1) The quality department shall be independent from the production control system and under the responsibility of the Quality Manager, whose main accountability is to supervise the implementation of the quality management policy.
- (2) The Quality Manager shall be directly responsible to the Accountable Manager. The personnel of the quality department shall execute the quality management functions independently, and their responsibility shall not be overlapped with the production control system. The quality department staff have veto power over the quality of maintenance work.
- (3) When the Quality Manager believes that a certain situation directly affects the airworthiness of the aircraft or its components, he/she can report directly to the Authority.

#### § 145.24 Safety Management System

The MO shall, based on its' quality system, establish a safety management system that meets the following requirements.

- (a) Establish an incident and hazard reporting system, and conduct necessary sorting and analysis of the reported information to identify potential or occurred risks.
- (b) Establish a risk management system, including risk analysis and assessment, risk control and risk monitoring, and serve as the basic basis for safety and quality management policies and measures.
- (c) Establish an internal audit system to evaluate the effectiveness of the organization's safety and quality management in a planned way, verify and perform self-improvement.

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- (d) Establish safety and quality supervision and assurance systems, implement effective monitoring and measurement of safety and quality levels, supervise the corresponding responsible departments and personnel to effectively evaluate various hidden dangers and take effective corrective measures in time to reduce safety risks, prevent the occurrence of safety and quality problems.
- (e) Establish an efficient investigation and error management mechanism, conduct timely investigations of safety and quality problems occurred during the maintenance process or detected after maintenance work released. Report the situation based on facts, analyze the root cause, and propose preventive measures.

The MO can establish a separate safety management system that meets the above requirements, or establish a safety management system on the basis of the quality system.

#### § 145.25 Engineering and Technical System

The MO shall establish the engineering and technical system to fulfill the engineering management responsibilities, including the establishment of the following maintenance implementation documents:

- (a) The MO shall follow the relevant Airworthiness Requirements and requirements of the "job sender" to develop maintenance Job cards which shall meet the following requirements:
- (1) The Job cards can be developed by the MO itself or provided by the "job sender", but it should have the function of setting and recording the working sequence and step. When the relevant Airworthiness Requirements are revised, the Job cards shall be evaluated whether amendment is necessary, and the Job cards shall be amended immediately if necessary.
- (2) The reference material quoted in the Job cards shall be indicated with the document number and the title/subject. The provisions of the work content in the Job cards shall be detailed and unambiguous. If the actual test value is required to be recorded, the unit of the measure shall be defined. If the relevant equipment or special tools are required to be used, the part number or identification number should be marked.
- (3) The Job cards used by the domestic MOs shall be in Chinese at least. In the case of request from the foreign or regional "job sender", the Job cards used by the domestic MOs may be in English while carrying out the maintenance on the civil aircraft registered in the other countries or regions or aircraft component thereof, but the MO shall ensure that the maintenance personnel can correctly understand the information contained in the Job cards. The foreign and regional MOs shall ensure their maintenance personnel can correctly understand the information

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contained in the Job cards.

- (4) Amendments made to the Job cards shall comply with the prescribed procedures approved or accepted by the Authority, and shall be approved by the authorized person. The approval for the amendments shall be dated and signed by the responsible person using either autographic signature or stamp.
- (b) The MO shall fulfill the following requirements to establish the basic maintenance documents pursuant to the relevant Airworthiness Requirements:
- (1) The basic maintenance document for the maintenance work means the Airworthiness Requirement defining the methods and the standards to perform the specific maintenance work. The information of the relevant Airworthiness Requirements may be quoted directly in such document in the case that the information of the relevant Airworthiness Requirements has already been verified as applicable and can be understood correctly by the maintenance personnel.
- (2) Where the relevant Airworthiness Requirements cannot be used directly due to language or the usage of alternate tools/equipment or material, the MO shall develop its own basic maintenance document for the specific maintenance work. When the relevant Airworthiness Requirement has been revised, the basic maintenance document shall be evaluated to verify whether amendment is necessary, and the evaluation so made shall be recorded. The basic maintenance document shall be amended in a timely manner if necessary.
- (3) The basic maintenance documents established by the MO shall be in the language that could be understood correctly by the maintenance personnel. The basic maintenance documents established by the domestic MOs shall be in Chinese at least.

#### § 145.26 Production Control System

The MO shall establish production control system within the organization itself, which shall consist of all associated production departments and maintenance workshops, the production system so established shall fulfill the following requirements:

- (a) The production control system shall ensure that the facilities, tools/equipment, material, qualified maintenance personnel and Airworthiness Requirements necessary for the maintenance work are available prior to the maintenance work.
- (b) The maintenance plan arranged by the production control system shall match the maintenance man-hours available at that time. The maintenance man-hours available shall be

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defined according to the qualification, authorization and competence of maintenance personnel, shift arrangement, etc.

- (c) 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 from 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 integrity of working process and the maintenance records to ensure the continuity of the maintenance work.
- (d) The production control system shall establish control and management over the maintenance man-hours for each piece of maintenance work. The MO shall record the actual maintenance man-hours used and compare it with the theoretical man-hours to ensure integrity of the maintenance work performed. The maintenance man-hours shall be measured in the unit of man per hour. The theoretical man-hours shall be defined upon the work scope, competence of the maintenance personnel, the availability of tools /equipment and the working conditions, etc. The initial establishment of the theoretical man-hours may follow the standards recommended by the civil aircraft or aircraft component manufacturer or the practice of similar MOs, the MO shall make continued adjustment on the theoretical man-hours based on statistics and analysis.

#### § 145.27 Training Management System

The MO shall establish training management system and the training program for each post pursuant to the requirements as prescribed in the § 145.21 of this regulation, and set up the personal technical archive for each post-holder and fulfill the following requirements:

- (a) The training program shall at least define the training contents, the objective of training, training time requirement, the means of training, examination requirement, training organization and training management responsibilities, etc. The training program and any revisions thereof shall meet the requirement of the Authority.
- (b) Each post-holder of the MO shall complete the training on the training items as required in the training program and be appropriately qualified before undertaking the specific maintenance task or maintenance management or supporting work independently, and shall complete the following recurrent training and continuation training as appropriate:
- (1) Receiving the recurrent training on amendments or changes made to the relevant civil aviation laws and regulation, national or industrial standards, technical knowledge, working

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procedures and maintenance human factors if applicable.

- (2) The post-holder, which has quit the specific work continuously for more than two years, shall complete the training on all the applicable items as prescribed in the training program before resuming working.
- (3) Where a new technique or equipment is introduced to the civil aircraft maintenance or maintenance management, the personnel involved shall complete the training on such technique or equipment prior to the use.
- (c) The MO shall establish the annual training plan for each post in accordance with the training requirements prescribed in the item (b) of this section. The training plan may be adjusted if necessary.
- (d) The MO shall establish and properly keep personal technical archive and training records for each post-holder.
- (e) The MO shall update the personnel technical archive and training records in a timely manner to ensure the validity thereof.
- (f) The personnel technical archive and training records shall be properly kept for preventing them from being accessed and amended by unauthorized personnel. The technical archive of the individual person shall be retained for at least two years after the person quit from the organization.

#### § 145.28 MOM

- (a) The MO shall develop the MOM to define how to comply with the requirements of this regulation. The MOM shall consist of Maintenance Management Manual (MMM) and the Working Procedures Manual (WPM). The MMM that defines the general requirements and basis to perform the approved maintenance work shall be approved by the Authority. The WPM that defines the specific working procedures of each individual department or workshop according to the requirements as defined in the MMM shall be accepted by the Authority. The Authority may raise amendment requirements.
- (b) The establishment, amendment and distribution of the MMM and the WPM shall comply with the following format and requirements:
- (1) The MMM and the WPM may be integrated into one volume, or divided into multiple volumes. If the form of multiple volumes is adopted, the appropriate cross reference shall be made in the MMM, and all applicable maintenance management requirements shall be covered

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in the manual.

- (2) The manuals of the domestic MO shall be in Chinese at least. The manuals of the foreign MO may be in Chinese or English.
- (3) The MMM shall be loose-leaf, and include the cover page, the index of content, the revision records, and the list of effective pages; the manual shall also have the name of the organization, the title of the manual, the chapter/section number, the date of issuance or revision, page number, etc. on each page.
- (4) The format of the WPM may be decided by the MO itself, but the manual shall be easy for keeping, referring, amending and controlling.
- (5) The MO shall keep one complete set of the valid MOM as the master, and the approval page of the master shall be the original. Copies of the MOM shall be at least distributed to the Accountable Manager, Quality Manager and Production Manager. The WPM shall be distributed entirely or partially to the relevant department or system according to the assigned duties and responsibilities. More copies shall be distributed to a department or system when necessary. The distributed copies of the manual shall be amended and redistributed as soon as possible once the MOM has been amended.
- (c) The MMM shall include at least the following:
- (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 to comply with the requirements of this regulation and will be always in the compliance with the requirements of this regulation.
- (2) Amendment and distribution: Amendment & distribution procedure of the MMM and the WPM.
- (3) Basic Maintenance Condition: The description of facilities at the locations as listed in the MOC, and the total number of personnel and the number of maintenance personnel, certifying staff involved in the approved maintenance work shall be included.
- (4) Organization: The organization chart and the description thereof that shall be able to indicate the relationships among the departments/systems.
- (5) Senior management personnel: The name, qualification, experience and duties and responsibilities of the Accountable Manager, Quality Manager and Production Manager.
- (6) Duties and Responsibilities: The description of the duties and responsibilities assigned to

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each department and each post.

- (7) Maintenance Scope of work: The description of the capability to perform the maintenance work which is within the scope of approval as specified in the MOC.
- (8) Various Management requirements.
- (9) Quality and safety management system.
- (10) The roster of the certifying staff and samples of the autographic signature or stamp of the certifying staff.
- (11)List of subcontractors and subcontracted items.
- (12) Samples of the forms and tags used by the MO.
- (d) The WPM shall include the following applicable subjects at least:
- (1) The basis/reference.
- (2) Applicability.
- (3) The qualification for each post.
- (4) Necessary tools/equipment and material.
- (5) Working or operating procedures.
- (6) Working standards.
- (7) Maintenance recording requirements.
- (8) Samples of the forms and tags used.

#### § 145.29 Maintenance Criteria

The MO shall comply with the following criteria while carrying out maintenance work:

- (a) Performing the maintenance work pursuant to the basic maintenance document which complies with the Airworthiness Requirements.
- (b) The MO shall report to the air operator in the case where the maintenance work exceeds the requirements of corresponding Airworthiness Requirements, and apply to the Authority through the air operator for approval of its maintenance plan.
- (c) Tools and equipment shall comply with the requirements prescribed in the Airworthiness Requirements and be in good and serviceable conditions. The precision of the measuring tools shall meet the requirements prescribed in the Airworthiness Requirements. For complex

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equipment, necessary maintenance and operating instructions should be provided.

- (d) Materials used for the maintenance shall be in good and serviceable condition. The serviceable parts, which are maintained by a MO itself and intended for re-installation, shall be attached with the internal serviceable tags issued by the MO itself. The serviceable parts, which are maintained by subcontractors, shall be provided with the maintenance release certificates as required by the MO which uses the subcontractors. Aircraft components stored in the working area shall have clear identification. Serviceable and unserviceable parts shall be segregated in store and properly protected during transportation.
- (e) The work that each post-holder is undertaking shall be consistent with the scope of work so authorized for such person. Unauthorized personnel shall work under the supervision of personnel with corresponding work authorization.
- (f) The MO shall adequately consider the impacts of the maintenance human factors on the maintenance work, to avoid imposing the requirements on the maintenance personnel which is beyond their normal human performance limitations. unless negotiated with the unions and workers, the working time of the maintenance personnel working on the aircraft or aircraft component directly shall not exceed 8 hours per day, the total working time per week shall not exceed 40 hours. Under special circumstances, the working time of the maintenance personnel can be extended, but the extension is up to 3 hours per each day, and the total overtime per month shall not exceed 36 hours. The MO shall also ensure that the maintenance personnel are not under influence of psychoactive substances such as drugs, alcohol, medicine etc., during the working time.
- (g) 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.
- (h) The following measures shall be taken to prevent the foreign objects from being left in the aircraft or aircraft components:
- (1) For the maintenance work required for assembling or access opening, an inspection/check to verify whether the foreign objects have been left in the aircraft or aircraft component shall be performed on the completion of assembly work or before the closure of the opening access.
- (2) For the line maintenance, the tools used in the working area shall be checked to confirm that there is no tool left in the aircraft prior to the release of aircraft.

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#### § 145.30 Maintenance Record

The maintenance records of the MO shall meet the following requirements:

- (a) The maintenance work shall be performed in such a way that the integrity of the maintenance records can be ensured. The maintenance records shall include at least but not limited to the completed Job cards, records of defects found and rectifications taken, components replaced and the associated certificates of conformity thereof, the list of airworthiness directives and service bulletins incorporated, deferred items, testing records, maintenance release certification, etc..
- (b) The maintenance records shall be completed according to the following requirements:
- (1) The same work shall be recorded on a standard worksheet or form. Except for records required by the foreign "job sender" and automatically generated testing records that may be in English, the maintenance records of the domestic MO shall be in Chinese at least. The maintenance records of the foreign MO other than the Job cards shall be in English as least.
- (2) The maintenance records shall be completed clearly, tidily and accurately. The test data shall be filled with actual measured value. Any amendment made to the maintenance records shall be approved by the authorized personnel.
- (3) The maintenance records may be completed in the form of paper written or computerized system. When using the paper written, the papers used shall be ensured that it will not be damaged during handling and storage; if it is recorded in a computer system, it shall be ensured that the information can be effectively transmitted and an operation accessing control system matching the personnel authorization shall be established.
- (c) The maintenance records shall be kept in accordance with the following requirements:
- (1) Establish a management system to avoid water and fire damage or loss. When using a computer system to keep maintenance records, an effective backup system and safety protection measures should be established to prevent unauthorized personnel from changing.
- (2) The records of the line maintenance work shall be kept at least 30 days upon completion of the records whereas the other maintenance records shall be kept at least two years.
- (d) When the operation of the MO terminates, all maintenance records completed within the two years prior to the termination shall be returned to the relevant "job sender".

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#### § 145.31 Maintenance Release Certificate

On completion of maintenance work on the aircraft or aircraft component, the maintenance release certificate shall be issued by the certifying staff in accordance with the following forms required by the Authority:

- (a) The line maintenance or other non-scheduled maintenance work completed in combination with line maintenance can be signed and released by authorized maintenance certifying staff on the flight record book after completion. For scheduled maintenance work and other maintenance work completed in combination, the maintenance release form can be determined by the MO, but it should be in a relatively standard format and include at least the following contents:
- (1) Name, address of the MO and its MOC number.
- (2) Name and address of the "job sender" and the repair/purchase order number.
- (3) Manufacturer, type and nationality registration number of the aircraft and the service time of the aircraft measured in flight hours, landing cycles, etc. prior to this scheduled maintenance work.
- (4) The subject/name of the maintenance work, the major defects found, the actions taken, and the list of replacement parts records and retention items, as well as the airworthiness directives, service bulletins and other additional work completed in conjunction with this maintenance work.
- (5) The compliance statement that all maintenance works completed for the aircraft and other maintenance works incorporated thereof comply with the requirements of the Authority regulations.
- (6) The name, license number, and autographic signature of the certifying staff as well as the date of release.
- (b) The release of aircraft components shall be in the form of the Release Certificate/Airworthiness Approval Tag (Form CAAC AAC-038) signed by the authorized maintenance certifying staff. When the maintenance of any component is for the needs of completing another whole maintenance work performed by the MO, the maintenance certificate required for such component may be in the form of internal certificate defined by the MO itself. The maintenance release certificates issued by the MO shall meet the following requirements:
- (1) The maintenance release certificates shall only be issued to the civil aircraft or aircraft components maintained by the MO itself.
- (2) The maintenance release certificate shall not be amended arbitrarily or used for other purposes.

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(3) The MO may adjust the maintenance release certificate under the specific circumstance to ensure the completeness of the contents filled-in, but shall not make any deletion or modification of the original content of the maintenance release certificate.

The approved MO shall provide the "job sender" with the maintenance release certificate together with the summary of all maintenance works carried out. The maintenance release certificate as well as the summary report provided by the domestic MO shall be in Chinese at least except when requested by the foreign MO it may be in English. The maintenance release certificate as well as the summary report provided by the foreign MO for the China registered aircraft or components thereof shall be in English at least.

The copy of the maintenance release certificate shall be kept together with the maintenance records.

#### § 145.32 Un-airworthy Condition Report

The MO shall report to the Authority within 72 hours of the following significant defects, unairworthy conditions or other important incidents found during maintenance or occurring with maintenance that affect the operation safety of the aircraft and the airworthiness of the civil aircraft or aircraft components.

- (a) Serious cracks, permanent deformation, burning damage or serious corrosion of structure found in the aircraft, engine, propeller or helicopter rotor systems.
- (b) Any defect that may affect the functions of engine, landing gear and flight control systems.
- (c) Any emergency system that failed the operational check or functional test.
- (d) The significant defect or malfunction of the civil aircraft or aircraft component which occurred due to the maintenance errors.

The un-airworthy conditions shall be reported in the form prescribed by Authority. The MO shall complete the form based on the facts encountered. In the case that the required information could not be completed within the prescribed time frame, the report shall be made by fax, telex, telephone or e-mail, etc. first and then followed with the formal report completed in the form prescribed by Authority.

The un-airworthy conditions shall be reported to the "job-sender" at the same time. The relevant information shall also be reported to the civil aircraft or aircraft component manufacturer when such conditions have been deemed as design or manufacturing faults or defects.

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# **Chapter V Supervision and Management**

#### § 145.33 Annual Report

The MO shall report the following information to the Authority on an annual basis:

- (a) Major changes in facilities, personnel, organizational structure, maintenance capabilities and management requirements.
- (b) Except for line maintenance, the information regarding maintenance of civil aircraft or its components in accordance with this Regulation and the issuance of maintenance release certificates.

#### § 145.34 Supervision

The authority may supervise and inspect the MO in the following manners:

- (a) Review and approval of the changes of MOC which applied in accordance with paragraph 1 of article 145.11 of this regulation.
- (b) Review and approval of revisions to the MOM which applied in accordance with paragraph 2 of article 145.11 of this this regulation.
- (c) Investigation of incidents involving maintenance quality and civil aircraft incidents.
- (d) Other planned and unplanned surveillance.

#### § 145.35 Integrity Management

If an applicant of the MOC or approved MO commits any of the following acts, it shall be recorded in the CAAC Industry Credit System as a serious fraudulent act according to the law:

- (a) Rejection of or cooperation with a surveillance audit carried out by the Authority according to the regulation.
- (b) Failure to execute the corrective actions or corrections within a time limit requested by the Authority according to the regulation.
- (c) Any act of deception, forgery, illegal modification or intentional submission of false materials and information in the process of applying, changing, or renewing MOC.
- (d) Knowingly carry out maintenance work that is beyond the approved maintenance rating or scope of work, and does not meet the provisions of the second paragraph of Article 145.13 of this regulation, the organization still violates the rules and signs the maintenance release which resulted in serious consequences.

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# **Chapter VI Legal Liability**

#### § 145.36 Penalties for not obtaining Maintenance Release Certificate

It is a violation of the provisions of this regulation if the MO engaging in maintenance activities without a corresponding MOC or exceeding approved maintenance scope, the Authority may order the MO to stop maintenance activities or revoke its MOC, and impose a fine of less than RMB 10,000 yuan; If the circumstances are serious, a fine of more than RMB 10,000 yuan and less than RMB 30,000 yuan shall be imposed.

#### § 145.37 Penalties for providing false materials and information

If the applicant conceals the relevant information or provides false materials and information to apply for the MOC, the Authority will not accept the application or not issue the MOC but issue a warning letter; the applicant cannot apply for the MOC again within 1 year from the date of the discovery of such behavior.

#### § 145.38 Penalties for obtaining Maintenance Release Certificate by deception and bribery

If the applicant obtains the certificate by cheating, bribery or other improper means, the Authority shall revoke the corresponding maintenance certificate and impose a warning or a fine of less than RMB 10,000 yuan; if the circumstances are serious, a fine of more than RMB 10,000 yuan and less than RMB 30,000 yuan shall be imposed. The applicant shall not apply for a maintenance certificate again within 3 years.

#### § 145.39 Organization Cannot Consistently Meet the Requirements of the Regulation

If the MO violates § 145.13 of this regulation and cannot maintain its continuous compliance with the requirements of this regulation, a warning and a fine of less than 10,000 yuan; If the circumstances are serious, a fine of more than RMB 10,000 yuan and less than RMB 30,000 yuan shall be imposed. If an accident is caused by such violation and it is under the accountability of the MO, the MOC or related maintenance ratings/items shall be temporarily withheld or revoked in accordance with the regulation.

# § 145.40 Maintenance Work Does Not Meet Requirements of Corresponding Airworthiness Requirements

If the MO violates article 145.13 of this regulation, and the maintenance work performed on the civil aircraft or its components does not meet the requirements of the corresponding

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Airworthiness Requirements, the Authority will issue a warning or a fine of less than RMB 10,000 yuan; if the circumstances are serious, a fine of more than RMB 10,000 yuan and less than RMB 30,000 yuan shall be imposed; If an accident is caused by such violation and it is under the accountability of the MO, the MOC or related maintenance ratings/items shall be temporarily withheld or revoked in accordance with the regulation. Where there are provisions in laws and administrative regulations, such provisions shall prevail.

#### § 145.41 Penalties for Providing False Documents

If the MO violates paragraph 4 of § 145.13 of this regulation and fails to report the information according to the fact required by this regulation to the CAAC RA, the Authority will issue a warning or a fine of less than RMB10,000 yuan; if the circumstances are serious, a fine of more than RMB 10,000 yuan and less than RMB 30,000 yuan shall be imposed.

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# **Chapter VII Supplementary Provisions**

#### § 145.42 Terms and Definition

The terms used in this regulation are defined as follows:

"The Authority" refers to the CAAC and CAAC Regional Administration. Unless otherwise provided for herein, for the domestic MO, the Authority generally mean the local CAAC RA; for the foreign MO, the Authority generally mean the CAAC.

"Civil Aircraft" means aircraft other than those used for the military, customs and police purposes.

"Aircraft Component (Parts)" means any part and appliance installed or to be installed on aircraft other than the aircraft airframe, including the complete engine, propeller and appliances.

"Maintenance" means any inspection, test, repair, defect rectification, replacement and overhaul of civil aircraft or aircraft component. The implementation of design change that have been approved by the airworthiness certification department is also regarded as maintenance work.

"Independent MO" means the MO which is independent from the air operator.

"Operator's MO" means the MO set up by an operator or jointly with others, but controlled or actually managed by the operator, and designated to provide maintenance services for the aircraft or aircraft components of the operator itself. The operator's MO shall be treated as an independent MO while providing maintenance services for the third-party organizations.

"Domestic MO" means MO whose management and maintenance facility within the territory of the People's Republic of China.

"Foreign MO" means a MO whose management and maintenance facility located in a country other than the People's Republic of China.

"Accountable Manager" means the person in a MO, who is accountable of the MO's compliance with the requirements of this regulation, and have the right to manage the personnel, property, and equipment of the organization to meet the requirements of this regulation.

"Quality Manager" means the person appointed within a MO, who is authorized by the Accountable Manager to manage and supervise the quality of the maintenance work performed by the MO. The Quality Manager shall be directly responsible to the Accountable Manager.

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- "**Production Manager**" means the person appointed within a MO, who is in charge of planning, preparing and performing of maintenance work.
- "Maintenance Certifying staff" means the person in a MO, who confirms that the civil aircraft or its components meet with the standards of corresponding Airworthiness Requirements, and issue a certificate of release to service for the civil aircraft or aircraft component.
- "Maintenance Human Factor" means the basic principle which applies to the maintenance of civil aircraft or aircraft components, with adequate consideration of the impact of human performance and limitations on the effectivity and safety of the maintenance work as well as the perfect harmonization of the human and other factors.
- "In-house fabricated Part" means an aircraft component which is designed and manufactured pursuant to the design data, material or process other than those specified in the continual airworthiness documents published by civil aircraft or aircraft component manufacturer.
- "Working Time of the Maintenance Personnel" is also termed as on-duty time of the maintenance personnel, it means the continuous period from the maintenance personnel reporting for his duty while accepting the maintenance task assigned by the MO till the maintenance task is completed or terminated. The period the maintenance personnel take from their home or residence to the reporting place is not included.

#### § 145.43 Effectivity and Repeal

This regulation will become effective on July 01, 2022. The "Approval of Civil Aircraft MO" (CCAR-145 Revision 3) promulgated by Order No. 152 of 2005 of the CAAC on 27 September 2005 will be repealed at the same time. Unless otherwise specified, the MO that has obtained the MO certificate issued in accordance with this regulation before the implementation of the revised version of this regulation shall fully comply with the requirements of this revised version by December 31, 2022.

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