 Civil Aviation Administration of China

Consultation Circular

No.: Civil Aviation Regulations [**20XX**]**XXX** No.:**AC-145-FS-001 R1** Issue:**2022** on **XX** , **Date** of

Application and Approval Guidelines for Domestic Maintenance Organizations

AC-145-FS-001 R1 Application and Approval Guidelines for Domestic Maintenance Organizations

1. Basis and Purpose

Provide guidance for the unit to apply for, change, and update the "Maintenance License", and disclose the relevant charging standards.

2. Scope

This Advisory Circular is applicable to domestic maintenance organizations engaged in the maintenance of civil aircraft, engines, propellers and components.

3. Withdrawal

The AC-145-1 "Application Guidelines for Domestic Maintenance Organizations" issued on February 10, 2003 and AC-145-7 "Maintenance of Aircraft Components" issued on February 9, 2003 are, AC-145-12 "Restriction on Maintenance Category of Aircraft Airframe Items" issued on July 2, 2003, AC-145-11R1 "Joint Accreditation with Hong Kong Civil Aviation Department and Macau Civil Aviation Authority" issued on May 17, 2004 Revocation .

4. Explanation

The maintenance organization is the core of the maintenance industry, an important subject to ensure flight safety, and the cornerstone of the development of a country's civil aviation industry. Civil aviation administrations in the world generally attach great importance to the management of maintenance organizations, and have established a management system based on the issuance of licenses as entry conditions. matter.

This advisory circular is a document that provides relevant guidance for domestic maintenance organizations. This revision is based on the fourth revision of CCAR-145 (CCAR-145 R4). Compared with the initial issuance, this revision has made a comprehensive adjustment in structure and content, and incorporated the contents of several revocation documents to facilitate the reference of domestic maintenance organizations. In addition, this revision adds the common code issues, to uniformly standardize the channels for clarifying doubts, and to explain the concerns of domestic maintenance organizations in conjunction with cooperation agreements with other civil aviation administrations.

In particular, the explanations of common and typical problems will be continuously supplemented according to the feedback from the industry. The specific feedback channels are as follows:

Continuous Airworthiness Maintenance Office, Flight Standards Department, Civil Aviation Administration of China

Address: 155 Dongsi West Street, Dongcheng District, Beijing Postal Code: 100710 Email:maintenance@caac.gov.cn

5. General information

5.1 The applicant for a domestic maintenance organization should be an organization with legal person qualifications, and the entity that actually undertakes the maintenance work and its management should be clearly defined, and there is no applicant or its legal representative, responsible manager, quality The manager's record of serious dishonesty in the relevant maintenance business area.

5.2 When the domestic maintenance organization applies for the "Maintenance Permit" and its changes and updates, it shall formally submit the application by the responsible manager signing the "Maintenance Permit Application" (see Appendix A of this document for an example).

5.3 The application acceptance and approval of the domestic maintenance organization shall be handled by the regional administration (also known as the Certificate Administration) where the applicant's main office and training place are located. The specific contact methods are as follows: Airworthiness Maintenance Office of the Civil Aviation Administration of North China:

Chaoyang District Capital Airport Road No. 10 Postcode: 100621

Tel: 010-64592341

E-mail: maintenance\_hb@caac.gov.cn

Civil Aviation Northeast Regional Administration Airworthiness Maintenance Office:

No. 3 Xiaoheyan Road, Dadong District, Shenyang Postcode: 110043

Tel: 024-88294340

E-mail: maintenance\_db@caac.gov.cn

Civil Aviation East China Regional Administration Airworthiness Maintenance Department:

No. 300 Yingbin 2nd Road, Shanghai Postcode: 200335

Tel: 021- 22326123

E-mail: maintenance\_hd@caac.gov.cn

Civil Aviation Central and South Regional Administration Airworthiness Maintenance Office:

No. 163 Yunxiao Road, Guangzhou City, Guangdong Province Postcode: 510405

Tel: 020-86121506

E-mail: maintenance\_zn@caac.gov.cn

Civil Aviation Southwest Region Airworthiness Maintenance Office of the Administration:

8 Yunling Road, Shengli Town, Shuangliu County, Sichuan Province

Postcode: 610200

No. 27 Taoyuan South Road Postcode: 710082

Tel: 029-88791080

Email: maintenance\_xb@caac.gov.cn

Civil Aviation Xinjiang Regional Administration Airworthiness Office:

No. 46 Yingbin Road, Urumqi, Xinjiang Postcode: 830016

Tel: 0991-3801608

Email: maintenance\_xj@caac.gov.cn

Note: For maintenance units that perform maintenance work in multiple locations, please refer to AC-145-FS-016 R2 "Multi-location Maintenance Units and Off-site Maintenance" for application acceptance and approval.

5.4 When the maintenance organization first applies for the "Maintenance License", it shall provide the responsible contact person and contact information in order to receive relevant notification information, and if the responsible contact person and their contact information change will be updated in a timely manner.

Note: The responsible contact person should be the quality manager of the maintenance organization or its authorized personnel, so as to pass the flight standard supervision and management system platform of the Civil Aviation Administration (referred to as FSOP system, website: http://fsop.caac.gov.cn/) Fill in the application materials online and submit. When applying for the first time, you need to obtain a platform account through the responsible contact person and the Certification Authority via email.

5.5 The fees for application acceptance, review and certificate issuance of the maintenance unit shall be calculated according to the cost of man-hours and formulated in accordance with the relevant charging standards of the People's Republic of China. See paragraph 8 of this document for details and the standard working hours calculation method.

6. Application Specifications for Maintenance Items

6.1 Airframe Maintenance Items

Domestic maintenance organizations can apply for the following maintenance work categories for airframe maintenance items: (1) Line maintenance: limited to the application of the air operator’s maintenance organization or its contracted maintenance organization. For details, please refer to AC- 145-FS-006 R3 Aircraft Line Maintenance. (2) Periodic maintenance: It should be determined with reference to the maintenance interval framework given by the Planned Maintenance Requirements (SMR) approved or approved by the aircraft review team of the Civil Aviation Administration, including the aircraft type and maintenance interval, and the maximum maintenance interval applied for. Periodic maintenance will automatically include periodic maintenance below the requested maintenance interval, as well as repairs where defects are found by performing planned maintenance tasks and modifications that can be performed in combination, no special application is required.

(3) Refurbishment: only applicable to models with time limit for airframe refurbishment. Refurbishment will automatically include scheduled maintenance during the refurbishment interval, as well as repairs where defects are found by performing scheduled maintenance tasks and modifications that can be performed in combination without special request.

Note: 1. Because line maintenance is closely related to the daily operation of the air operator, the Civil Aviation Administration of China does not separately approve the application of the line maintenance work category of the maintenance organization or the contracted maintenance organization of the non-air operator, but does not limit the maintenance organization of the air operator or the maintenance organization of the air operator.license.

Guidelines

2. Although the Scheduled Maintenance Requirements (SMR) provides a framework for maintenance intervals, it does not limit the inclusion of individual maintenance tasks in a scheduled maintenance work package that exceed their requested/approved maximum maintenance intervals. When this happens, the quality department can evaluate the actual maintenance capability of the unit, and implement it together after confirming that it has the corresponding capability.

3. When the above-mentioned application for regular maintenance or renovation has individual maintenance tasks that do not have the ability to maintain, the maintenance unit should attach a clear task list and indicate the planned outsourcing unit. 6.2 Engine (or APU) Maintenance Items

Domestic maintenance organizations may apply for the following maintenance work categories for engine (or APU) maintenance items:

(1) Periodic maintenance: refer to the engine (or APU) maintenance manual approved by the Civil Aviation Administration for airworthiness certification. Determine the maintenance interval framework, including engine (or APU) model and maintenance interval, and indicate the highest maintenance interval applied for. Periodic maintenance will automatically include periodic maintenance and inspection below the requested maintenance interval, as well as repairs and modifications that can be combined to perform scheduled maintenance tasks to find defects, no special application is required.

(2) Overhaul: Only applicable to engine (or APU) models with overhaul time limit. A refurbishment will automatically include periodic inspections and inspections at the refurbishment interval, as well as repairs where deficiencies are found by performing scheduled maintenance tasks and modifications that can be performed in combination without special request.

Note: When the above-mentioned application for regular maintenance or renovation has individual maintenance tasks that do not have the ability to maintain, the maintenance unit should attach a clear task list and indicate the planned outsourcing unit. 6.3 The

domestic maintenance organization of the propeller maintenance project may apply for the following maintenance work categories for the propeller maintenance project: (1) Periodic maintenance: should be determined with reference to the maintenance interval frame given in the Propeller Maintenance Manual (PMM) approved by the Administrator, including the propeller type and maintenance interval, and indicate the maximum maintenance interval requested. Regular maintenance will automatically include regular maintenance and testing below the requested maintenance interval, the same as repairs and modifications that can be combined with defects found by performing planned maintenance tasks, without special application.

(2) Overhaul: Only applicable to propeller models with overhaul time limit requirements. A refurbishment will automatically include periodic inspections and inspections at the refurbishment interval, as well as repairs where deficiencies are found by performing scheduled maintenance tasks and modifications that can be performed in combination without special request.

Note: When the above-mentioned application for regular maintenance or renovation has individual maintenance tasks that do not have the ability to maintain, the maintenance unit should attach a clear task list and indicate the planned outsourcing unit. 6.4 Component maintenance projects

Domestic maintenance organizations can apply for the following maintenance work categories for component maintenance projects: inspection, repair (including inspection) or overhaul (if applicable, including inspection and repair) of subsystems in an ATA chapter, with the following: List of specific parts maintenance capabilities of elements:

(1) Part number: the specific part number of the part, which can be expressed as XX, including suffixes representing multiple specific configurations;

(2) Name: the name of the part;

(3) ATA chapter number: the part to which the part belongs The ATA section number should be specific to the first part of the subsystem section number, such as XX-X0;

(4) Manufacturer: the original manufacturer of the component;

(5) Maintenance category: one of testing, repair or overhaul (repair is deemed to include testing capability; Refurbishment is deemed to include testing and repair capabilities);

(6) Remarks: Other maintenance basis documents other than CMM (if any) should be specified. Note: 1. Considering the possible differences in the specific ATA chapters divided by the original manufacturers, the maintenance work category of the application for component maintenance items should be described in the form of "ATA chapter + first sub-chapter" (such as 21-20), but maintenance The four-digit chapter number should be indicated in the competency list and correspond to the application items.

2. For part numbers with repair or refurbishment categories, modifications that can be performed in combination are automatically included, no need to specify.

3. For the subsystem division of the ATA chapter of typical models, please refer to the ATA corresponding content of the main models corresponding to this part.

6.5 Other items

The domestic maintenance organization can also apply for the following separate items, listed as "other items", and specify:

(1) Special process for the maintenance of the above airframe, engine (or APU), propeller and components alone;

(2) Engine , Landing gear replacement;

(3) Aircraft dismantling.

Note: If the special process work of the maintenance organization is only to support its specific airframe, engine, propeller or component maintenance work, it does not plan to undertake the maintenance work alone, and there is no need to apply for a separate project.

7. Application and approval procedures

7.1

The domestic maintenance organization that applies and approves the initial application shall submit the Application for Maintenance License and the following application materials:

(1) Maintenance management manual;

(2) Training program;

( 3) Component capability list and/or route capability list (if applicable);

(4) Compliance statement to CCAR-145, including relevant supporting materials. After receiving the above-mentioned complete application materials, the Qualification Certificate Administration will feedback the acceptance status and fee notification to the applicant within 5 working days.

After accepting the applicant's official application materials, the Certificate Authority will discuss with the applicant's responsibilities coordinates and determines the review plan, selects the review team, and conducts the document and on-site review after confirming the receipt of the paid review fee.

In the process of review, if it is found that it does not meet the requirements of CCAR-145, the applicant will be formally notified in the form of "Notice of Problems Found in Review". For the found problems listed in the "Notice of Problems Discovered in Review", the applicant should feedback the corrective measures taken to the review team through the responsible liaison within 30 days. If the corrective measures cannot be approved, the review team will give feedback to the applicant in a timely manner, and give the applicant another 30 days to give feedback on supplementary corrective measures.

Note: If the applicant fails to feedback corrective measures or supplementary corrective measures within 30 days, it will be regarded as the applicant's automatic waiver and the approval process will be terminated. If there is a dispute between the applicant and the review team on the discovery of the problem or the approval of the corrective measures, the applicant may directly submit a written request to the Flight Standards Department of the Civil Aviation Administration of China.

If no problem is found or the corrective measures have been approved, the Certificate Authority will approve the maintenance management manual and training program within 20 working days, and issue a "Maintenance License" to the applicant.

Note: For the specific component maintenance capability list of component maintenance items, it will be approved in combination with the permitted maintenance items in the Maintenance License. No approval is required but it will be filed and provided for public inquiry. After the component maintenance capability list is changed (including new part numbers and deleted part numbers), it shall be filed with the Certificate Administration in a timely manner.

The Maintenance Permit is valid for 3 years unless expressly restricted or the approval is withdrawn. 7.2 Change application and approval

If the maintenance organization has changes that affect the validity of the "Maintenance License", it should submit a change application to the Certificate Authority through the FSOP system, and submit the "Maintenance License Application" and attach the following application materials. :

(1) Draft revision of maintenance management manual (on demand);

(2) Draft revision of training syllabus (on request);

(3) Draft changes to the maintenance capability list of specific components (on demand);

(4) Other necessary instructions.

After receiving the above-mentioned complete application materials, the Qualification Certificate Administration will give feedback to the applicant on the acceptance status within 5 working days, including clarifying that only document review or on-site review is required, and a fee notice will be attached. If it does not involve major changes in the maintenance management system, management documents and maintenance items, there is generally no need for on-site review, and the Certificate Administration will handle the changes accordingly through the document review process. Fees will be calculated according to the criteria set out in paragraph 8 of this document, based on the items of change and the method of review.

In the case of only document review, the Certificate Authority will directly review the application materials after confirming the receipt of the paid review fee; if an on-site review is required, the Certificate Authority will coordinate with the applicant's responsible liaison to determine the review plan, select and send Review team, and conduct document and on-site review after confirming receipt of the paid review fee.

The procedure for issuing a changed Maintenance Permit after review is the same as the initial application; however, the changed Maintenance Permit will not change its validity period.

7.3 Renewal application and approval

The maintenance organization shall submit the "Maintenance License Application for Domestic Maintenance Organizations" to the Certificate Administration 6 months before the expiration of its "Maintenance License", and attach the following application materials: (1) Maintenance management Draft manual changes (as needed);

(2) Draft changes to

the training syllabus (as needed); (3) Necessary explanations.

After receiving the above application materials, the Qualification Certificate Administration will feedback the acceptance status to the applicant within 5 working days, and attach a fee notification to the acceptance status. Fees will be calculated based on the renewal of the approved items in accordance with the criteria set out in paragraph 8 of this document.

Note: When accepting the renewal application, the Certificate Administration will refer to the annual report submitted by the maintenance organization after approval. Failure to submit or provide false reports will result in inadmissibility.

8. Standard of Charges

8.1 Basic Principles

domestic maintenance organizations applying for "Maintenance License" are charged according to the principle of multiplying the standard working hours by the standard working hours.

The standard working hours are divided into the sum of the two parts of application acceptance and on-site review. For the calculation methods of each part, please refer to the following content of this paragraph.

Note: The document review part is not calculated separately because each of the above fees is involved. The working hour fee is calculated at RMB 200 per person • working hour. If an on-site inspection is required, the maintenance unit shall bear the additional costs arising therefrom, including the transportation, accommodation and meeting expenses of the inspectors. If the total cost of on-site inspection exceeds 20,000 yuan, a maximum of 20,000 yuan will be charged. Note: The above charges are calculated in RMB.

8.2 Application for standard working hours

Acceptable working hours are not differentiated between application categories and application items, and are calculated as 5 man-hours each time. The standard working hours for on-site inspection of each project are as follows:

(1) Airframe project: Each maintenance production line with A inspection or above maintenance is calculated as 40 man-hours. 8 people • man-hours for each model with A inspection (inclusive) or the equivalent level or below.

(2) Engine (or APU): Each maintenance production line is calculated as 24 man-hours, and 8 man-hours are added for each additional model in the same maintenance production line.

(3) Propeller project: Each maintenance production line is calculated as 16 man-hours, and 4 man-hours are added for each additional propeller model in the same maintenance production line.

(4) Landing gear project: 16 man-hours for each maintenance production line, and 4 man-hours for each additional landing gear model in the same maintenance production line.

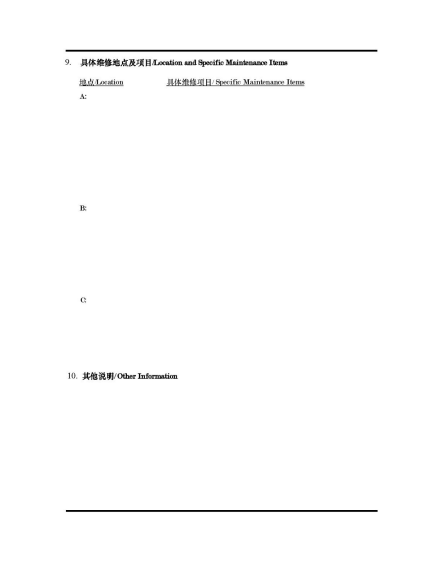
(5) Items of tires, brake pads and glass: 12 man-hours for each maintenance production line, 2 man-hours for each additional product model in the same maintenance production line.

(6) Other component items: Each ATA chapter subsystem is calculated as 8 man-hours, and ATA each additional subsystem 2 man-hours.

(7) Other items: For special process projects, each special process is calculated as 4 man-hours; engine replacement and landing gear replacement are calculated as 8 man-hours for each model; aircraft dismantling is calculated as 20 man-hours for each production line, Each additional model in the same production line increases 6 man-hours.

Note: The actual review working hours may be different from the standard working hours due to factors such as the layout, cooperation, and discussion of problems found by the maintenance unit. However, it is difficult to predict the review fee. Therefore, only the standard working hours will be charged, and the actual review working hours will not be specifically considered.

Appendix **A.** Maintenance License



Component Maintenance Capability List Sample

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Serial Number  No.  B. | Part No.  P/N | Name  Description | ATA  Chapter  ATA  Code | Manufacturer  OEM | Maintenance Work Category  Maintenance Category | Remark  Remark |
| 1 | XXXXXX  XX | XXXX XXXXX | XX-X0 | XX XXX XXXX | XX | XXXX |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Appendix C. Explanation of Typical Problems

C.1 How to determine the main body responsible for maintenance work and its management?

According to the main body that actually undertakes the maintenance work and its management, the following situations are distinguished:

(1) The legal entity as a whole is the main body: the application form can only fill in the full name of the legal entity. It is applicable to units whose main business is the maintenance of aircraft and aircraft parts. Generally, the legal representative or the manager who is directly responsible for it is the responsible manager.

(2) The department under the legal entity is the main body: the application form should fill in the full name of the legal entity and attach brackets to clarify the main body that actually undertakes the maintenance work and its management. Applicable to units not mainly engaged in the maintenance of aircraft and aircraft parts, such as airlines, manufacturers or other units engaged in various businesses, the legal representative or the manager directly responsible for it may act as the responsible manager, or through authorization The head of the subordinate department is the responsible manager, and the production manager and the quality manager are appointed within the subordinate department.

Any of the above-mentioned persons who are clearly responsible for the manager should be qualified and energetic to manage the maintenance and training work as a condition.

C.2 Does the maintenance organization of domestic aircraft or aircraft manufacturers need to apply for the approval of CCAR-145.

CCAR-145R4 cancels the category of manufacturer's maintenance organization, which means that the domestic aircraft or aircraft manufacturer's maintenance organization also needs to obtain approval in accordance with CCAR-145 before engaging in the maintenance of aircraft or aircraft components that it manufactures itself.

C.3 Do the units outsourcing maintenance work need to apply for the approval of CCAR-145 or be included in the list of their component maintenance capabilities?

In the case of compliance with the CCAR-145 department's restrictions on the outsourcing of the applied maintenance capabilities, for individual highly specialized work links (such as surface treatment, heat treatment, etc.), the outsourcing unit does not need to apply for the approval of the CCAR-145 department, nor does it need to issue Airworthiness Approval Label (Form AAC-038); For Subparts

outsourcing maintenance (such as the blades in the regular maintenance of the engine, the structural unit in the regular maintenance of the airframe). It can be divided into the following situations: (1) If the original parts are returned for installation after outsourced maintenance, it can be an item that is not included in its maintenance capability list, and there is no need to issue an airworthiness approval label (Form AAC-038) after maintenance; (2) If The original parts will not be returned for installation after outsourced maintenance, but are planned to be used in the next maintenance. The outsourced unit needs to hold a maintenance license approved in accordance with CCAR-145 and issue an airworthiness approval label (form AAC-038).

(3) In the case of purchasing or exchanging used aircraft parts, the source unit providing the parts needs to hold a maintenance certificate approved in accordance with CCAR-145 and issue an airworthiness approval label (Form AAC-038).

In addition, for sub-components outsourced maintenance involving foreign maintenance organizations, the foreign maintenance organization needs to hold a maintenance license approved in accordance with CCAR-145.

C.4 How to apply for JMM approval under the Joint Maintenance Management Cooperation Arrangement (JMM)? According to the "Joint Maintenance Management Cooperation Arrangement" (JMM) signed on November 30, 2021, the approval of maintenance organizations in the Mainland and Hong Kong and Macau has reached full mutual recognition, and there is no need to apply for JMM. For maintenance involving Hong Kong and Macau, an airworthiness approval label (Form AAC-038) can be issued directly in accordance with the approval of CCAR-145. Conversely, when sending the unit for maintenance, the airworthiness approval label (HKCAD or AACM Form One) issued by the maintenance unit in Hong Kong and Macau can also be used directly. C.5 According to the Civil Aviation Administration of China and the Civil Aviation Administration of Singapore (CAAS) signed the "Technical Arrangement for Aviation Maintenance of the Civil Aviation Administration of China and the Civil Aviation Administration of Singapore", is it the same as JMM?

The Civil Aviation Administration of China and the Civil Aviation Administration of Singapore (CAAS) signed the "Technical Arrangement for Aviation Maintenance between the Civil Aviation Administration of China and the Civil Aviation Administration of Singapore (CAAS)" in August 2019, which is different from the JMM, and still needs to apply to the Civil Aviation Administration of Singapore (CAAS) for approval, only on-site inspection is not required. and ongoing supervision. For the specific application procedures, please refer to the "Execution Procedures for the Aviation Maintenance Technical Arrangement between the Civil Aviation Administration of China and the Civil Aviation Authority of Singapore" signed in April 2021 for Domestic Maintenance Organizations Therefore, domestic maintenance organizations for maintenance involving Singapore should issue an Airworthiness Approval Label (CAAS Form One) in accordance with the approval of Part SAR-145. Conversely, when sending to a Singapore unit for maintenance, the Singapore maintenance unit also needs to issue an Airworthiness Approval Label (Form AAC 038) approved by CCAR-145.