

# **VOLUME 1    CERTIFICATION**

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## **PROCEDURE 1    CERTIFICATION ON OPERATION SPECIFICATIONS OF AIR OPERATING CERTIFICATE FOR CIVIL AVIATION TRANSPORTATION**

**GENERAL** : NO OPERATOR SHALL ENGAGE IN ANY AIR TRANSPORTATION UNLESS THERE IS IN FORCE A CERTIFICATE ISSUED BY THE DIRECTOR OF THE CAA, (OR A DELEGATED AUTHORITY SPECIFIED BY THE DIRECTOR), AUTHORIZING THE OPERATOR TO ENGAGE IN SUCH OPERATIONS. THIS AUTHORIZATION CAN ONLY BE ISSUED UPON SATISFACTORY ASSESSMENT OF FINANCIAL, ECONOMIC AND LEGAL MATERS. ONCE THIS AUTHORIZATION ISSUED. THE OPERATOR SHALL APPLY FOR AN OPERATOR CERTIFICATE, ON A FORM SPECIFIED BY THE CAA, TO THE DIRECTOR OF FLIGHT STANDARDS. FLIGHT STANDARDS WILL THEN DESIGNATE A CERTIFICATION TEAM OF SENIOR INSPECTORS. THIS TEAM SHOULD CONSIST OF A CERTIFICATION PROJECT MANAGER (CPM), THIS CAN BE ANY SPECIALTY, ONE OR MORE OPERATIONS INSPECTORS, MAINTENANCE INSPECTORS AND AVIONICS INSPECTORS.

IT IS IMPERATIVE THAT ALL TEAM MEMBERS ARE EXPERIENCED IN THE CERTIFICATION PROCESS, ARE TEAM ORIENTED, HAVE THE ABILITY TO ANALYZE SYSTEMS AND ARE ABLE TO COMMUNICATE EFFECTIVELY IN WRITTEN AND ORAL PRESENTATIONS. THIS IS AN EXCELLENT OPPORTUNITY FOR TRAINING OTHER INSPECTOR PERSONNEL TO OBSERVE AND/OR TO PARTICIPATE IN THE CERTIFICATION PROCESS UNDER SUPERVISION. FAILURE OF THIS TEAM TO PROPERLY ACCOMPLISH THIS CERTIFICATION PROCESS HAS A DIRECT IMPACT ON AVIATION SAFETY AND PUBLIC INTEREST.

## CERTIFICATION PROCESS

**1. GENERAL.** This section describes the certification process. When followed by the aviation safety inspector(ASI) the guidance provided here will result in the operator's compliance with the CAA regulations. Under no circumstances will an applicant be certificated until the CAA is assured that the applicant is capable of fulfilling responsibilities and complying with the CAA regulations in an appropriate and continuing matter.

**2. THE CERTIFICATION PROCESS.** The certification process provides for interaction between the applicant and the CAA, from initial inquiry to certificate issuance or denial. The process consists of the following five phases :

- \* Preapplication Phase
- \* Formal Application Phase
- \* Document Compliance Phase
- \* Demonstration and Inspection Phase
- \* Certification Phase

### 3. PREAPPLICATION PHASE.

A. Initial Inquiry. An initial request for information regarding certification may be verbal or in writing.

#### B. Preapplication Statement of Intent (PASI)

(1) The submission of a PASI shows intent and prompts the CAA to allocate resources. A PASI should be submitted only after the applicant has reviewed the appropriate regulations.

C. The Certification Team. The CAA will select a certification team consisting of at least one Airworthiness Inspector, one Avionics Inspector, and one Operations Inspector.

(1)The CAA will designate one team member as a Certification Project Manager (CPM). The Certification Project Manager is the primary spokesperson for the CAA throughout the certification

process.

(a) The Certification Project Manager is the primary contact with the applicant. The Certification Project Manager schedules and conducts meetings and coordinates any correspondence with the applicant.

(b) The Certification Project Manager must be sure each certification task is completed in an acceptable and timely manner. Responsibilities include ensuring that all certification matters are thoroughly coordinated with each team member.

(c) The Certification Project Manager should schedule periodic meetings with the certification team and CAA management to ensure that everyone is fully informed of the current status of the certification. The Certification Project Manager must notify CAA management of any information that may significantly affect or delay certification or that may attract media or political interest.

(2) Each team member will respond to requests for assistance made by the Certification Project Manager and keep the Certification Project Manager apprised of the status of the certification. Anything that may delay certification must be brought to the attention of the Certification Project Manager immediately.

NOTE: Although guidance should be provided to the applicant, it is important that each document, procedure, demonstration, or inspection reflects the applicant's knowledge, skills, and abilities. Therefore, refrain from providing explicit instructions on how a task should be accomplished.

#### D. Preapplication Meeting.

(1) Arrangements for the Preapplication Meeting. After being assigned, the CPM shall contact the applicant to arrange a preapplication meeting. The applicant should be advised that the key management personnel listed on the PASI should attend the preapplication meeting, and should be prepared to discuss specific aspects of the applicant's proposed operation in general terms.

(2) Package of Precertification Information. The preapplication meeting between the CPM, other certification team members, and the applicant sets the tone for the rest of the certification process. Therefore, it is important that the CPM be thoroughly prepared to conduct the meeting. The CPM should review the PASI and assemble a precertification information package to be given to the applicant. The precertification information package shall consist of at least the following:

\* Applicable Certification Job Aid

\* Sample Schedule of Events format

(3) Briefing of the Applicant. At the preapplication meeting, the applicant and any of his key personnel attending the meeting should be briefed in as much detail as necessary to ensure that they understand the certification process. The CPM should use the Certification Job Aid and the Schedule of Events format as guides to facilitate the discussion and to ensure that all elements of the certification process are covered. The applicant should be encouraged to ask questions about any area of the process not clearly understood.

(4) Verifying the Information on PASI. The first item for discussion should be verification of the information on the PASI, such as the type of operation, types of aircraft, geographic areas of operation, and location of facilities. When changes to this information have occurred, the applicant must annotate the changes on the PASI.

(5) Informing the Applicant of Pertinent Regulations. It is essential that the applicant understands which regulations are applicable to the proposed operation. The applicant should be advised to acquire and become familiar with the CAA Regulations which are pertinent to the proposed operation. The applicant and his personnel must be made aware of their responsibilities during the certification process. It is to their benefit to submit required items as soon as they become available and to notify the CPM immediately of any problems or changes in the proposed operation.

(6) The CPM should further advise the applicant that the CAA will proceed with the certification process but will not issue the Air Operator Certificate until the applicant provides proof that appropriate economic authority has been obtained.

(7) It is essential during the preapplication meeting that the applicant has a clear understanding of the form, content, and documents required for the formal application. The applicant shall be informed that the formal application must be submitted and, after initial review, notification of its acceptance or rejection will be provided to him by letter. The applicant should be encouraged to submit the formal application as far in advance as possible of the intended starting date.

(8) Formal Application Letter. The CPM shall inform the applicant that the formal application must be a letter containing a statement that the letter serves as a formal application for an air carrier certificate. The letter must contain the full and official name of the applicant. This letter must be signed by the owner when applying as an individual, all partners when applying as a partnership, or an authorized officer(s) when applying as an organization such as a company or a corporation. The letter shall contain the physical location address of the applicant's intended primary operating location. The applicant's mailing address shall be included in the formal application letter if different than its

letterhead. Additionally, the letter will confirm the identity of key management personnel such as the general manager, director of operations, director of maintenance, chief pilot, and chief inspector, as applicable. When a request for deviation from the qualification requirements of management personnel is anticipated, it should be noted in the formal application letter.

(9) Application Attachments. The formal application letter must be accompanied with at least the attachments described in the following subparagraphs. The applicant must understand that this letter and these attachments will be the minimum information acceptable.

(a) Schedule of Events. The applicant needs to understand that the Schedule of Events is a key document to be presented with the formal application. The Schedule of Events is a list of items, activities, programs, aircraft and/or facility acquisitions which the applicant must accomplish or make ready for CAA inspection before certification. The Schedule of Events will include the applicant's best estimate of the date the item, activity, program, aircraft, or facility acquisitions will be accomplished or ready for inspection. The applicant shall be informed that the Schedule of Events must be constructed in a logical and sequential manner. The Schedule of Events must also provide for a reasonable amount of time for the CAA to review and accept or approve each item or event, before scheduling other items or events that are dependent on such acceptance or approval. The applicant should be informed that failure to accomplish an item or event in a satisfactory or timely manner in accordance with the Schedule of Events could result in a delay in certification. The applicant should be advised that if deficiencies are detected during the review of manuals and other documents, they will be returned for amendment or correction. Such action may also cause additional delays in the certification process.

(b) Company General Manuals. This attachment to the formal application may be in the form of one or more manuals or sections of manuals. These manuals or sections of manuals must contain information about the applicant's organization, general policies, duties, responsibilities of personnel, operational control policy, and procedures. In practice, these manuals are often known as the general operations manual (GOM), and the general maintenance manual (GMM). The applicant may submit equivalent manuals or sections of manuals being developed which provide the same type of information. However, the applicant should be encouraged to provide a draft outline of the major parts of his entire manual or separate parts. This early draft outline, similar to a table of contents, helps to assure that all required material is accounted for and that the major parts of the yet uncompleted manual material have been listed on the Schedule of Events with proposed submission dates. The applicant will be required to eventually submit, in accordance with the Schedule of Events, all completed portions of the manual required by the appropriate regulation. If the applicant has any additional portions of the proposed manual ready for review at the time of formal application, the CPM should encourage the submittal of those portions with the application.

(c ) Initial Company Training Curriculums. It should be recognized that aircraft, facility arrangements, and some training program elements may not be fully developed at the time of formal application. The date when all required training course curriculums will be submitted must be annotated in the Schedule of Events. However, a draft of the initial company training curriculum, completed as nearly as possible in its final form, must be attached to the formal application. The initial company training curriculum must include at least the following curriculum segments for each applicable crewmember, maintenance personnel or dispatcher position:

- \* Basic Indoctrination Training
- \* Emergency Training
- \* Initial Aircraft Ground Training
- \* Initial Aircraft Flight Training

(d) Management Qualification Resumes. This attachment shall include resumes and contain information on the qualifications, certificates, ratings, and experience of personnel selected for the following positions, or equivalent:

- \* General manager (when applicable)
- \* Director of operations
- \* Director of maintenance
- \* Chief pilot
- \* Chief inspector (when applicable)

(i) The applicant shall be informed that the effectiveness of his management personnel will be observed throughout the certification process.

(e) Documents of Purchase, Contracts, and/or Letters of Intent. This attachment should provide evidence that the applicant has, or is in the process of procuring, aircraft, facilities, and services to conduct the type of operation proposed. This evidence may be in the form of proof of formal purchase, lease, or contractual arrangements. If formal arrangements have not been completed, letters or other documents showing preliminary agreements or intent will suffice until formal contracts or agreements are available. If the applicant intends to make outright purchases or develop his own services, but does not plan to do so until after he submits his formal application, a simple statement of intent will suffice. These documents and/or letters should provide evidence that the applicant is in good faith, committed to making arrangements for aircraft, supporting facilities, and services as necessary for the proposed operation. Examples of the types of equipment, facilities, and services that should be addressed in these documents, contracts, or letters include the following:



- \* Aircraft
- \* Station facilities and services
- \* Weather and NOTAM gathering facilities and services
- \* Communications facilities and service
- \* Maintenance facilities and service
- \* Aeronautical charts and related publications
- \* Airport analysis and obstruction data
- \* Contract training or facilities

(f) Initial Compliance Statement.

(i) Preparation of the initial compliance statement and ultimately the final compliance statement benefit the applicant by systematically ensuring that all applicable regulatory aspects are appropriately addressed during the certification process. The initial compliance statement shall be in the form of a complete listing of all regulatory sections pertinent to the operation which the applicant is proposing. This list should reference applicable subparts and each relevant section of the subparts. Next to each section, the applicant must provide a brief narrative description or preferably a specific reference to a manual, or other documents, which describe how each regulation will be complied with, if known, at the time the formal application is submitted.

(ii) Where the compliance information has been developed (for example, the manual material submitted with the formal application), a manual reference or a description of the method of compliance must be entered next to the applicable regulatory section. If the method of compliance has not been fully developed, the applicant should indicate that the compliance information will be provided in the final compliance statement.

(iii) The list of the specific regulations and subparts can be arranged so that when the method of compliance is formalized, the description or reference can be added to the list in preparation for the final compliance statement. The applicant shall be advised that the final compliance statement must be submitted, reviewed, and accepted before initiating proving tests. The following illustrations are examples of how relevant sections of the regulations should be presented in an initial compliance statement and/or a final compliance statement as appropriate.

(10) Conclusion of Preapplication Meeting. The CPM must ensure that the applicant understands that the formal application, with the previously described attachments, must be complete and acceptable or the entire formal application will be rejected.

**4. FORMAL APPLICATION PHASE.** Upon receipt of a formal application, the certification team

must initially review it and make a determination of its acceptability within the next 5 working days. The initial review serves two purposes and verifies that at least those items required for formal application have been submitted. The minimum required items are as follows:

- \* The formal letter requesting certification.
- \* The required formal application attachments
  - Schedule of Events
  - The company's General Manuals
  - The company's Initial Training Curriculums
  - Management qualification resumes
  - Documents of purchase, contracts, leases and/or letters of intent
  - Initial Compliance Statement

The initial review also permits a determination of whether the submitted material represents a feasible proposal and is of sufficient quality to allow for a productive formal application meeting and to proceed with the certification process. The following paragraphs are provided as direction and guidance for this initial review.

A. Schedule of Events Attachment. The Schedule of Events, when accepted, represents a commitment for both the applicant and the certification team. The Schedule of Events is a list of each major item, activity, program, aircraft and/or facility acquisition. It also sets milestones for accomplishment or submission of the listed items. Therefore, when reviewing the Schedule of Events, the certification team must carefully consider the feasibility of the proposed schedule with respect to the following criteria:

- \* Logic of sequence
- \* Timeliness of events
- \* Completeness of events
- \* Inspector or other CAA resource availability

(1) Logic of Sequence. Many activities and events listed in the schedule must occur before other activities and events. For example, aircraft systems training cannot begin until the Aircraft Flight Manual (AFM) is available or the company aircraft operating manual has been reviewed and accepted/approved; the aircraft conformity inspection must be completed before the emergency evacuation demonstration. The inspector should use the certification job aid as a tool to ensure the applicant's proposed Schedule of Events is logical in terms of event sequence.

(2) Timeliness of Events. The Schedule of Events must be reasonable, and realistically provide sufficient time for the certification team to review the applicant's various documents, manuals, and proposals. For example, if the applicant proposes to submit the Minimum Equipment List to the CAA with insufficient time for review and approval before the proving tests begin, the schedule should be considered unacceptable.

(3) Completeness of Events. The number and kinds of submissions made by the applicant for evaluation and acceptance or approval, varies according to the complexity of the proposed operation. Specific manuals and other documents that are required for a particular type of applicant are annotated on the Schedule of Events and the Certification Job Aid. The CPM should use the job aid to assure that all required manuals and documents have been included in the Schedule of Events.

(4) Inspector or Other Resource Availability. Availability and capability of office personnel resources is another element of concern when determining whether a Schedule of Events can be met. The CPM must determine, for example, that qualified inspectors are available or can be made available from other offices to assist the certification team in the conduct of extensive manual reviews consistent with the proposed Schedule of Events. Also, the CPM must ascertain the qualifications of the available inspectors with respect to the proposed operation. The CPM must also determine if the certification project will require the use of resources other than flight standards inspectors and the availability of those resources.

B. Company General Manual Attachments. Company general operation and maintenance manual attachments must be given a cursory review, first to determine that the appropriate information has been submitted. Second, the overall content and scope of the manual material must be evaluated to determine if the applicant is proceeding in an appropriate manner and in compliance with the regulations. These completed or partially completed manual submissions provide early indications of the quality of the applicant's manual development program. An in-depth review and evaluation and the acceptance, approval, or rejection of the manual will be accomplished in the document compliance phase.

C. Initial Company Training Curriculum Attachments. The initial company training curriculum attachments must be reviewed to determine that each of the four curriculum segments have been submitted for each applicable applicable position. Each curriculum must be reviewed to determine that basic regulatory requirements are being met and that the applicant is proceeding in an appropriate manner with the development of his training programs. A detailed review and initial approval of the training curriculums will be accomplished in the document compliance phase after the applicant has finalized all training arrangements, including instructor lesson plans. The applicant may not start training until each curriculum has been initially approved.

D. Management Qualifications Attachments(Resumes). Management qualifications must be reviewed by the certification team to determine that there is a resume for each required management position and that these resumes contain the basic information necessary to determine regulatory compliance. The depth of review should be only to determine that there are no obvious omissions or significant discrepancies. An example of a significant discrepancy might be that the regulation requires an individual to hold an Airline Transport Pilot Certificate but the resume shows that the individual holds only a Commercial Pilot Certificate. A detailed review of the management qualifications and effectiveness must be accomplished during the document compliance and the demonstration and inspection phases.

E. Documents of Purchase, Contracts, Leases, and Letters of Intent Attachment. These documents must be reviewed to determine that they include the appropriate information. The documents should be reviewed for obvious omissions or significant discrepancies. Examples of obvious omissions might be the lack of documents indicating intent to acquire an aircraft or to arrange for a station facility. A significant discrepancy might be a document that reflects a contractual arrangement with another organization to perform a type of maintenance when it is known that the other organization is not qualified to perform that type of maintenance. These documents will not necessarily receive further review during the certification process since the aircraft, facilities, and services referenced in the documents will be the items inspected for acceptance or approval. It is not necessary or desirable for a separate document to exist for every item the applicant will have to acquire. However, there should be sufficient evidence to show that the applicant has made initial but definite arrangements to acquire the major items needed for certification.

F. Initial Compliance Statement Attachment. The initial compliance statement must be reviewed. First, to determine that it complies with the form and content. Second, it must be evaluated to determine that the applicant is proceeding in an appropriate manner. It should indicate that if the applicant continues to complete the statement in the same manner, an acceptable final compliance statement will be produced. The final compliance statement must be given a detailed review and accepted before beginning the enroute segment of the proving tests, if proving tests are required. If proving tests are not required, the final compliance statement must be reviewed and accepted during the document compliance phase.

G. Initial Determination of Formal Application Acceptability.

(1) The decision whether to reject the formal application before the formal application meeting, or to proceed with the certification process by scheduling a meeting with the applicant, must be tempered with good judgement and a reasonably flexible attitude. Results of informal meetings, reviews, and observations of the applicant's capabilities during the preapplication phase should supplement the

decision making process. Other factors such as working relationships and understandings established during the preapplication phase should also be considered. However, the decision must be based primarily on the results of the initial review of the formal application and attachments. The only criteria requiring automatic rejection of the formal application before the formal application meeting is the absence of required information in the application letter and/or the absence of one or more of the required attachments.

(2) Due to the many variables involved, it is not practical to provide other criteria that would require rejection before the formal application meeting. If it is apparent that the applicant has not made a conscientious attempt to comply with the requirements of a formal application, or if deficiencies and/or omissions are of such a serious nature that they could not be resolved during a meeting, the formal application should be rejected. If it is rejected before the meeting, the reasons for rejection must be explained in an accompanying letter which also returns the application to the applicant within 5 working days of receipt.

(3) Normally, if an applicant has been thoroughly briefed and has acquired a good understanding of the requirements during the preapplication phase, the formal application should be of sufficient quality that any discrepancies, omissions, and/or "open" questions can be resolved during the formal application meeting. For example, if the chronology of the Schedule of Events needs to be adjusted for logic of sequence, timeliness, or to accommodate inspector resource requirements, such adjustments can normally be accomplished during the meeting. Often minor and occasionally some significant discrepancies or omissions in manual material, training curriculums, and/or the initial compliance statement can be resolved during the formal application meeting. Questions about management qualifications and documents substantiating the acquisition or the intent to acquire aircraft, facilities, and services can often be answered during this meeting.

(4) If the CPM and the certification team decide to proceed with the certification process, the CPM must contact the applicant and schedule the formal application meeting. The applicant must be informed that attendance of key management personnel is required. The CPM should avoid making any statement concerning the acceptability of the application at this time. The CPM and the certification team must prepare for the meeting by identifying discrepancies, omissions, or questions that must be satisfactorily resolved for the meeting to be considered successful.

H. The Formal Application Meeting. The CPM is responsible for conducting the formal application meeting. Except for unanticipated circumstances, all members of the certification team must be present. Normally, the CPM should open the meeting with the applicant, all of his key management personnel, and the certification team present.

(1) The first item to be discussed should be the formal application letter. Any questions or missing information must be resolved to the satisfaction of the CPM.

(2) The second item to be discussed should be the detailed Schedule of Events. The CPM and the certification team members should provide clear and reasonable explanations as to why a scheduled item is not feasible or why any omission, deficiency, or question must be satisfactorily resolved or answered before the application can be considered acceptable. The applicant should be encouraged to explain the reasons for the manner in which the Schedule of Events was constructed or the reason for any omissions. His explanations will help in reaching acceptable resolutions. The CPM and the certification team should offer suggestions and recommendations which would make the Schedule of Events acceptable to the CAA. If unfeasible schedules, omissions, deficiencies, or "open" questions concerning the Schedule of Events can not be resolved to the satisfaction of the CPM, the meeting should be terminated since further discussion of other attachments would serve no purpose. In this situation, the applicant will be informed that the formal application is rejected and that it will be returned by letter with an explanation of the reasons for its rejection.

(3) After problem areas with the Schedule of Events have been mutually resolved, the CPM and the certification team should discuss with the applicant any identified omissions or deficiencies associated with the initial compliance statement. Recommendations on how to correct such omissions and deficiencies should be offered to the applicant. The applicant should be advised that the final compliance statement must reflect these corrections and that similar omissions or deficiencies must not be allowed to recur when the final compliance statement is submitted.

(4) After review of the initial compliance statement, it is appropriate to divide into two groups. The remainder of the formal application attachments pertaining to operations should be reviewed by operations inspectors and the applicant's key operations management personnel. Attachments dealing with maintenance should be reviewed by airworthiness inspectors and the applicant's key maintenance management personnel. Any identified omissions or deficiencies in the remaining attachments should be discussed. The applicant should be provided clear explanations concerning what is considered omitted or why an item is considered deficient. Suggestions or recommendations on how to correct deficiencies should be offered to the applicant and his personnel. Mutual agreements with respect to acceptable corrective action must be reached during the meeting. The applicant should be advised that similar omissions or deficiencies must not recur in similar documents and/or material to be presented at later dates in accordance with the Schedule of Events.

(5) Team members must inform the CPM if mutual agreements cannot be reached during the separate meetings with operations and airworthiness personnel. Lacking such agreement, the CPM should terminate the meeting and inform the applicant that the formal application is not acceptable. The

formal application must be returned to the applicant with a letter explaining the reasons for the rejection.

(6) When all parties have reached agreement on the course of action to be taken to correct identified omissions or deficiencies in the formal application as submitted, the CPM should reconvene the complete group. The CPM should encourage the applicant and his key management personnel to present any questions they may have concerning the forthcoming certification process. The CPM and certification team members should provide candid answers and discuss freely all aspects of the certification process. The applicant should be encouraged to obtain and review the appropriate inspector handbooks as they reflect the procedures and standards which CAA inspectors will use during the document compliance and demonstration and inspection phases.

(7) Before concluding the formal application meeting, the CPM must make certain the applicant clearly understands the following:

(a) Notification of acceptance or rejection of the formal application will be provided in writing within a few days after the meeting.

(b) Notification of acceptance of the formal application package does not in any way constitute acceptance or approval of the separate attachments. The attachments will be reviewed further, and should additional corrective actions be required, the applicant will be expected to take such corrective action. Acceptance or approval of each attachment will be indicated separately at a later date during the certification process.

(c) If the applicant is unable to meet the Schedule of Events, the CAA will still need equivalent amounts of time, as agreed upon during the meeting, to make the necessary reviews and inspections. Consequently, the proposed startup date could be delayed. In addition, unanticipated demands on CAA personnel could also delay the certification process. The applicant should be informed that the CAA may at times be forced to redirect resources to other activities such as accident or enforcement and may not be able to meet the agreed upon Schedule of Events.

#### I. Final Determination of Formal Application Acceptability.

(1) After the formal application meeting, the CPM and the certification team must decide whether the meeting was considered successful. Normally, if the meeting has run its full course without significant disagreements, it should be considered successful and result in an acceptable formal application. However, the certification team, after thorough consideration of the results of the meeting, may decide there are sufficient reasons to reject the formal application. These reasons should clearly

indicate that to proceed with the certification project would not be productive. Such reasons might include inadequate agreements on appropriate courses of action, or evidence that an applicant has a serious lack of understanding of regulatory requirements and the certification process. If it is decided that the meeting was not considered successful, the formal application must be rejected.

(2) If the formal application meeting is successful, a letter acknowledging receipt and acceptance of the formal application must be prepared and forwarded to the applicant as soon as possible, but not later than 5 working days after the meeting.

#### J. Rejection of Formal Application.

(1) Rejection of a formal application will often be a sensitive issue for an applicant since he will most likely have already expended funds and resources. In some cases he may be able to bring to bear outside influential pressure on the issue. These factors could lead an inspector to accept unsound proposals outlined in the formal application. While the CPM is expected to react in a reasonably flexible manner, formal applications which are clearly not workable must be rejected. It is important to thoroughly document the reasons for the rejection and retain that documentation for the record.

(2) The rejection must be in the form of a letter that returns the formal application with all attachments and any copies back to the applicant within 5 working days after the meeting. The letter must state in general terms major reasons for rejection. Several specific examples which clearly substantiate each major reason must be cited.

### 5. DOCUMENT COMPLIANCE PHASE

#### A. General

(1) The document compliance phase is that part of the certification process when the applicant's manuals and other documents are reviewed and either accepted, approved, or rejected, as appropriate. The conduct of this phase is primarily accomplished by members of the certification team. Each submission by the applicant will be given an in-depth review to ensure it complies with applicable regulations and conforms to safe operating practices.

(2) It should be noted that to ensure clarity, the document compliance phase and the demonstration and inspection phase are discussed individually. In practice, however, these two phases overlap. For example, when a training program has been initially approved, the operator may begin his training while other manuals and program elements are being reviewed. As another example, review of the final compliance statement is the last element of the document compliance phase, mainly because it



is accomplished by the certification team. However, the final compliance statement is normally reviewed and accepted just before the aircraft proving tests.

**B. Review of Applicant's Submissions.** During this phase, members of the certification team evaluate and approve or accept the applicant's manuals and any other required documents. Review of the applicant's submissions should be accomplished by simultaneous reference to the CAA regulations, any completed portions of the initial compliance statement, and the appropriate manual or document. The following are examples of typical submissions from applicants during the document compliance phase. This list is not all-inclusive and certain items may not be applicable to a particular type of operation.

- Management personnel resumes outlining proposed management qualifications and compliance histories
- General Operations Manual
- General Maintenance Manuals
- Continuous Airworthiness Maintenance Program/Manuals
- Weight and Balance Procedures
- Training Program/Manual
- Approved Aircraft Flight Manual
- Company Aircraft Operations Manual (This is not required if an operator elects to use the manufacturer's approved Airplane Flight Manual.)
- Minimum Equipment List
- Configuration Deviation List
- Cockpit Checklist
- Passenger Briefing Card
- Noise and Environmental Assessments
- Airport Runway Analysis
- Deviation Requests
- Hazardous Materials/Security Program
- Flight Attendant Manual
- Dispatch/Flight Following/Flight Locating Procedures
- Operation Specifications (including operations, maintenance, and avionics)
- Maintenance Reliability Program
- Continuous Analysis and Surveillance System
- Proving Test Plan
- Emergency Evacuation Demonstration Plan
- Final Compliance Statement

C. The Final Compliance Statement.

(1) The final compliance statement serves the following two purposes:

(a) It ensures the applicant has adequately addressed all regulatory requirements applicable to the proposed operation.

(b) It aids the certification team in determining where the regulatory requirements have been addressed in the applicant's manuals, programs, and procedures. In evaluating the applicant's final compliance statement the certification team may find it helpful to compare (in a side by side manner) the CAA regulations, the applicant's manuals, and the final compliance statement. The final compliance statement documents how the applicant intends to comply with each applicable regulation. It either directs the inspector's attention to specific company manuals or documents or provides a statement which describes how the applicant intends to comply with a specific regulatory requirement.

(2) If the applicant's final compliance statement does not serve the preceding purposes, it shall be returned with a letter outlining the deficient areas. Representative enroute proving tests must not be conducted until the certification team is satisfied, through its review of the final compliance statement, that all regulatory requirements have been adequately addressed. The applicant's methods of compliance will be evaluated throughout the demonstration and inspection phase.

D. Document Deficiencies.

(1) If the team's review reveals deficiencies in the applicant's submissions, the CPM should return the manual or document to the applicant with a letter outlining the deficient areas. The team should be ready to offer suggestions on how to improve the product but avoid "writing" the applicant's manual. The certification team should remember that it is the applicant's responsibility to develop manuals and procedures which ensure safe operating practices and compliance with the rules.

(2) If during the document review the applicant does not meet the Schedule of Events, or his submissions are not of sufficient quality to warrant further review, the CPM shall schedule a meeting with the applicant to review all the deficiencies in detail. If appropriate, the CPM will advise the applicant of either the impracticability of continuing the certification project due to the unacceptability of the submissions, or agree to a new, modified Schedule of Events and reenter the document compliance phase at the appropriate point.

**6. DEMONSTRATION AND INSPECTION PHASE**

A. General. In this phase the certification team determines that the applicant's proposed procedures and programs for training and directing personnel in the performance of their duties are effective. In this phase the emphasis is on compliance with regulations and safe operating practices. As previously mentioned, certain segments of the document compliance phase often occur simultaneously with certain events in the demonstration and inspection phase. For example, inspectors may be observing pilot training at the applicant's facilities (demonstration and inspection phase) while other certification team members are approving and or accepting maintenance manuals in the district office (document compliance phase).

B. Observations and Monitoring of Events. Through observation and other forms of on site evaluation during the demonstration and inspection phase, members of the certification team observe and monitor many types of applicant activities. The manner in which the applicant is to be evaluated while conducting different segments of this phase is outlined in various sections of this handbook. Specific handbook references for each activity or event are referenced on the certification job aid. The following list of activities or events are representative of events which occur in the demonstration and inspection phase. This list is not all-inclusive and certain items may not be applicable to a particular type of operator:

- \* Conduct of Training Programs (classroom, simulators, and aircraft training)
- \* Airmen Testing and Certification (airmen, crewmembers, and dispatchers, as applicable)
- \* Station Facilities (equipment, procedures, and personnel)
- \* Recordkeeping Procedures (documentation of training, flight and duty times, and flight papers)
- \* Flight Control (dispatch, flight following, or flight locating capabilities)
- \* Approved Maintenance Program Procedures
- \* Maintenance Activities (facilities, personnel, technical information, and spare parts)
- \* Aircraft (conformity inspection and aircraft maintenance records)
- \* MELs and CDLs (compliance with AOM/AFM maintenance procedures, etc., if applicable)
- \* Weight and Balance Control, if applicable (procedures, accuracy, document control)
- \* Emergency Evacuation Demonstration
- \* Aircraft Proving Tests (ability of applicant to operate independently, safely, and in compliance with the applicable regulations)

C. Demonstration and Inspection Deficiencies.

(1) If at any time during the demonstration and inspection phase the applicant does not meet the Schedule of Events, or his conduct of various activities (such as training, emergency evacuation) or certain items( such as MEL, recordkeeping procedures) proves to be deficient, appropriate corrective action must be taken. Required and recommended corrective measures for addressing specific types of

deficiencies are in the appropriate subject matter discussions in other chapters of this handbook. The CPM should schedule meetings with the applicant, as necessary, to review all deficiencies in detail.

(2). If appropriate, the CPM shall advise the applicant of the impracticality of continuing the certification project, due to the extent of deficiencies, or agree to a new, modified Schedule of Events and reenter the demonstration and inspection phase or the document compliance phase, as appropriate.

## **7. CERTIFICATION PHASE**

A. General. The certificate and approved operations specifications are issued to the applicant after all significant unsatisfactory items have been corrected. This action completes the certification process. The applicant shall not be certificated under any circumstance until the certification project manager (CPM) has determined that the applicant is fully capable of fulfilling its responsibilities and that the applicant will comply with the CAA regulations in an appropriate manner. Before issuance, insignificant or noncritical items that need further resolution should be thoroughly discussed with the applicant, and agreements concerning corrective action should be obtained in writing.

B. Preparation of The Certificate of Authorization. When the applicant has met all the requirements, an appropriate will be issued.

C. Issuance of Operations Specifications.

(1) When it is determined that the applicant has met, or will soon meet all regulatory requirements, the appropriate certificate and operations specifications will be prepared. These documents should normally be prepared during the demonstration and inspection phase.

(2) An applicant for an air carrier certificate will not, for any reason, be issued operations specifications until the applicant has presented to the CPM a copy of his economic authority.

(3) Before issuance, the operations specifications will be signed by the applicant and the appropriate principal inspectors. The operations specifications will then be given to the new certificate holder.

D. Certification Report. When the new operator is certificated, the CPM is responsible for assembling a certification report. This report must be signed by the CPM and will include the name and title of each team member who assisted in the certification project. The report shall consist of 10 sections, a through j, as follows:

- a. The Preapplication Statement of Intent
- b. The Certification Job Aid
- c. The Formal Application letter
- d. The Schedule of Events
- e. The Final Compliance Statement
- f. The Proving Test Evaluation Report (if applicable)
- g. The Emergency Evacuation Demonstration Report (if applicable)
- h. A copy of the Operations Specifications issued
- i. A copy of the certificate issued
- j. A summary of major difficulties experienced during the certification process and/or any recommendations which may enhance the process must be noted by phase and specialty. Summaries of major difficulties and/or recommendations should be arranged as follows:
  - (1) Preapplication Phase (operations, maintenance, avionics). Include summaries of difficulties or recommendations by specialty.
  - (2) Formal Application Phase (operations, maintenance, avionics). Include summaries of difficulties or recommendations by specialty.
  - (3) Document Compliance Phase (operations, maintenance, avionics). Include summaries of difficulties or recommendations by specialty.
  - (4) Demonstration and Inspection Phase (operations, maintenance, avionics). Include summaries of difficulties or recommendations by specialty.

E. Certification Report Distribution. The CAA shall retain the certification report.

## **8. FUTURE ACTIVITIES**

A. Transition. The CAA must ensure that there is an orderly transition from the certification

process to certificate management.

B. Post certification surveillance. Assigned ASIs should carefully observe the operator during the first 90 days of operation. Additional inspections may be necessary to determine operating practices are performed at an adequate level of safety.

(1) Particular attention should be directed to areas that may not have been demonstrated or observed during certification, such as cargo and passenger loading.

(2) The ASI may detect a need for changes in the methods, operation, inspection, and/or maintenance during this early period of operation. The ASI must request changes to the observed deficiencies.

C. Prepare operator annual work program.

**SAMPLE LETTER**  
**FORMAL APPLICATION LETTER**

CAA Flight Standards  
Taipei  
Taiwan, R.O.C.

Dear Sir,

This letter serves as a formal application for certification. We intend to operate a scheduled passenger operation, based in Taipei, Taiwan, R.O.C. Our company, to be known as Dragon Airlines, will have its operations and maintenance facilities located in hangar 1 at Sung Shan Airport, Taipei, Taiwan. Our mailing address is the same.

Key management personnel are identified as follows:

General Manager - Ms. Chen  
Director of Operations - Ms. Hsui  
Director of Maintenance - Mr. Ma  
Chief Pilot - Ms. Hsui  
Chief Inspector - Mr. Wong

We intend to operate two MD 90's on a scheduled basis between Taipei and Hong Kong. Our relatively small size will allow combining the duties of director of operations and chief pilot.

We look forward to working with you.

Ms. Chen

General Manager

**SAMPLE LETTER**

**ACCEPTANCE OF FORMAL APPLICATION**

**(Letter within 5 working days of formal application meeting)**

Name  
Street  
City

Dear Mr.(Name)

As a result of the formal application meeting conducted on April 1,1997, by the CAA certification team and your company management team, we have determined that your formal application has met the basic application requirements and is acceptable. Acceptance of the application does not convey specific approval of the attachments. Specific approvals or acceptance of the attachments will be appropriately conveyed after a detailed evaluation by the CAA certification team.

We look forward to working with you in the continuation of the certification process.

Sincerely,

CPM



**SAMPLE LETTER**  
**REJECTION OF FORMAL APPLICATION**  
**AFTER FORMAL APPLICATION MEETING**

Name  
Street  
City

Dear Sir,

The results of our formal application meeting with your company's management personnel have been reviewed by the certification team. We are unable to accept your formal application at time. The Schedule of Events does not provide for a workable proposal.

The Schedule of Events indicates that training for crewmembers will begin 30 days before the company's Aircraft Operating Manual will be completed. It is our position that aircraft ground training can not be satisfactorily accomplished without this manual being fully developed and available for student use. In addition, the schedule indicates that your final compliance statement will not be ready for CAA review until after enroute proving tests are to begin. The final compliance statement must be revised and found satisfactory before these tests begin.

Our positions concerning these areas were fully discussed with your staff during the meeting, however, we were unable to obtain a satisfactory resolution. We are returning your formal application for your further consideration. Until a mutual resolution can be achieved, it would be unproductive to proceed with the certification process.

Sincerely,

CPM

**SAMPLE LETTER**  
**REJECTION OF FORMAL APPLICATION**  
**(MISSING OR INCOMPLETE DOCUMENTS)**

Name  
Street  
City

Dear Ms.(Name)

The CAA has reviewed your formal application for an Air Operator Certificate. We find it necessary to return your application due to its incompleteness. Examples of its incompleteness are as follows:

1. Resumes of Ms Wong, Director of Maintenance and Mr. Chang Director of Operations were not included.
2. The initial compliance statement is incomplete. For example, Chapter 8 of ICAO Annex 6 is not addressed and there is no indication that the methods of compliance of these requirements will be included in your final compliance statement. The Initial Company Training Curriculum was not included.

We are returning your letter of application with attachments for your disposition. Please contact us if we can clarify the minimum requirements for formal application.

Please resubmit when you have corrected these deficiencies and any other omissions which may exist.

Sincerely,

CPM

**INSTRUCTIONS FOR COMPLETING  
PREAPPLICATION OF INTENT**

SECTION 1A. This section must be completed by all applicants.

1. Enter the company's official name and mailing address.
2. This address must be the physical location where primary operating activities are based. It is where the offices of management personnel required by regulation are located. If the address is the same as item 1, enter "same" .
3. Enter the estimated date when-operations or services will begin.
4. This information will be used to assign a company identification number. You may indicate up to three, three-letter identifiers, such as ABC, or XYZ. If all choices have been assigned to other. operators or agencies, a random selected number will be assigned.
5. Enter the names, titles, and telephone numbers of required management personnel  
Include the general manager, directors of operations and maintenance, chief pilot, chief inspector, et cetera, as applicable.

SECTION 1B. This section must be completed by all air operator applicants.

6. The proposed type of operation must be indicated. Check as many boxes as apply.

SECTION 1C. This section must be completed by all repair station applicants.

7. The proposed type of repair station must be indicated. Check as many boxes as apply.

SECTION 1D. This section must be completed by all air operator applicants.

8. Indicate the proposed number and types of aircraft to be operated, as well as the number of passenger seats or, for cargo aircraft, payload capacity.
9. Enter the areas in which the operations are to be conducted. For example R.O.C., for international operations, enter each country.

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“申請前意圖陳述 PREAPPLICATION STATEMENT OF INTENT”

申請前意圖陳述 PREAPPLICATION STATEMENT OF INTENT		
第 1A 部份 Section 1A. 由所有申請人填寫完成 To Be Completed By All Applicants		
1. 公司名稱及郵遞地址 Name and mailing address of company	2. 主要作業基地之地址 Address of physical base where operations will be conducted	
3. 預定開始日期 Proposed startup date	4. 欲申請之公司識別碼(3 個字母)，依優先順序填寫 Requested three-letter company identifier in order or preference 1. _____ 2. _____ 3. _____	
5. Management Personnel 管理人員		
姓名 Name (Last, first, middle)	職稱 Title	電話號碼(含區域代碼) Telephone (including area code)
第 1B 部份 Section 1B. 由所有申請航空使用者填寫完成 To Be Completed By Air Operator		
6. 申請之飛航類型 Proposed type of operation (於方塊中勾出所有申請項目 check as many as applicable)		
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> 運輸業許可證 Operating Certificate                         </div> <div> <input type="checkbox"/> 客運及貨運 Passenger and Cargo  <input type="checkbox"/> 純貨運 Cargo Only  <input type="checkbox"/> 定期航班 Scheduled Operations  <input type="checkbox"/> 非定期航班 Nonscheduled Operations                         </div> </div>		
第 1C 部份 Section 1C. 由所有申請修理廠所者填寫完成 To Be Completed By Air Agency		
7. 申請之機構及檢定類型 Proposed type of operation Proposed type of agency and rating(s)		
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> 修理廠所 Repair Station  <input type="checkbox"/> 國內 Domestic  <input type="checkbox"/> 國外 Foreign                         </div> <div style="width: 33%;"> <input type="checkbox"/> 新申請 New  <input type="checkbox"/> 更新 Renew                         </div> <div style="width: 33%;"> <input type="checkbox"/> 衛星 Satellite  <input type="checkbox"/> 機體 Airframe  <input type="checkbox"/> 動力系 Powerplant  <input type="checkbox"/> 螺旋槳 Propeller  <input type="checkbox"/> 無線電 Radio                         </div> <div style="width: 33%;"> <input type="checkbox"/> 儀器 Instrument  <input type="checkbox"/> 附件 Accessory  <input type="checkbox"/> 特業修護 Specialized Service                         </div> </div>		
第 1D 部份 Section 1D. 須由所有申請航空使用者填寫完成 To Be Completed By Air Operators		
8. 航空器資料 Aircraft Data	9. 將飛航之區域 Geographic area of intended operations	
數目及機型 (製造廠、型式、序列) Numbers and types of aircraft (by makes, model, and series)	旅客座位數目或貨物酬載量 Number of passenger seats or cargo payload capacity	

# AIRWORTHINESS INSPECTOR'S HANDBOOK

## “申請前意圖陳述 PREAPPLICATION STATEMENT OF INTENT”

第 1E 部份 Section 1E. 由所有申請人填寫完成 To Be Completed By All Applicants		
10. 為增進對所申請作業或業務瞭解所提供之額外資料(如需要，另附其他頁次) Additional information that provides a better understanding of the proposed operation or business (attach additional sheet, if necessary)		
11. 此表格內之陳述及資料表示欲向民用航空局申請檢定之意願 The statements and information contained on this form denote an intent to apply for 民用航空局 certification		
簽名 Signature	日期 Date	姓名及職稱 Name and Title
第 2 部份 Section 2. 由 單位填入 To Be Completed By Office		
民用航空局收件 Received by 民用航空局		
資料 Data:		用途 For: <input type="checkbox"/> <input type="checkbox"/> 僅為提供資訊 Information only
備註 Remarks:		

# AIRWORTHINESS INSPECTOR'S HANDBOOK

民用航空運輸業申請航務作業規範工作輔助表

AIR CARRIER CERTIFICATION JOB AID

航空公司名稱(申請人) : NAME OF APPLICANT		民用航空運輸業證可證號 (CERTIFICATION NO.)		
工作項次 JOB FUNCTION	階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIGNATURE	日期 DATE	參考 REFERENCE
	<p style="text-align: center;">第一階段 申請前階段</p> <p style="text-align: center;">PHASE I PREAPPLICATION PHASE</p>			
A.	初步指導工作:			
	申請前之意願陳述 Preapplication Statement Of Intent (PASI)			
B.	檢定小組人員名單(至少須包括一名航務, 維修及空用電子查核員) Certification Team Designated (at least one operations, one maintenance and one avionics inspector) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">             姓名 Name              (CPM) 檢定小組長 _____              小組人員 _____              _____              _____              _____              _____           </div> <div style="width: 45%;">             專長 Specialty              _____              _____              _____              _____              _____              _____           </div> </div>			
C.	申請前會議作業 Conduct Preapplication Meeting			
	1. 查證申請前之意願陳述 Verify PASI Information			
	2. 概述檢定程序 Overview of certification process			
	3. 提供檢定相關資料 Providing Certification Package:			
	a. 檢定程序工作指南 Certification Job Aid			
	b. 工作進度表 Schedule of Events			
	c. 其他適用文件 Other Applicable Publications and Documents			
	4. 解釋正式申請應送審之文件 Explain Formal Application Submissions			

備註 Remark:

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工作項次 JOB FUNCTION	階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIGNATURE	日期 DATE	參考 REFERENCE
	第二階段 正式申請階段 PHASE II FORMAL APPLICATION PHASE			
A.	審查使用人所提出之文件 Review operator's submissions			
	1. 正式申請函 Formal Application Letter			
	a. 航空公司正式名稱 Full and Official Name			
	b. 通信地址 Mailing Address			
	c. 主要作業地區(基地) Primary Operating location (base)			
	d. 主要管理人員名單 Key Management Personnel Names			
	2. 正式申請附件 Formal Application Attachment			
	a. 工作進度表 Schedule of Events			
	b. 相關合約協議影本(Doc's of purchase/contract/lease/letter of interests)			
	c. 一般手冊(運作及維修) General Manual (operations and maintenance)			
	d. 新進人員之訓練課程 Initial New Hire Training Curriculums(OPS, MX, AV)			
	e. 主管人員之資歷 Management Personnel Resumes			
	f. 初步符合法規之陳述(Initial Compliance Statement)			
B.	評估民航局審核本案時程須具備之能力及相關資源 Evaluate CAA Resource Capability Based On Schedule Of Events			
	備註 Remark:			
C.	正式申請會議 Formal Application Meeting			
	1. 會議時間 Schedule Meeting 日期 時間 Date _____ Time _____			
	2. 討論每一項申請文件 Discuss Each Submission			
	3. 解決所發現之缺失及待解決項目 Resolve Discrepancies/Open Items			
	4. 審查檢定程序 Review Certification Process			
	5. 如無法符合檢定作業時程時, 可能會遭遇之影響 Review Impact If Schedule Of Events Not Met			
D.	發佈受理/拒絕申請之信函 Issue Letter Accepting/Rejecting Application			
備註 Remark:				

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工作項次 JOB FUNCTION	階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIG	退回日期 DATE RET'D	重送日期 DATE RESUB'D	核准/接受日期 DATE APPRV'D/ ACCEP'D	參考 REF
	第三階段 文件符合階段 PHASE III DOCUMENT COMPLIANCE PHASE					
ICAO DOC. 9376 CH 4	A. 評估訓練手冊 Evaluate Applicable Training Manuals					
	1. 飛航組員訓練 Crewmember Training					
	a. 基礎教育訓練 Basic Indoctrination					
	b. 緊急訓練 Emergency Training					
	c. 地面學科訓練 Ground Training					
	d. 飛航訓練 Flight Training					
	e. 複習訓練 Recurrent Training					
	f. 機型轉換/昇等訓練 Transition/Upgrade Training					
	g. 機型差異訓練 Differences Training					
	h. 保安訓練 Security Training					
	i. 危險物品 Hazardous Material					
	j. 檢定機長/飛航教師 Check Airman/Instructor					
	2. 簽派員訓練 Dispatcher Training					
	a. 初階訓練 Initial Training					
	b. 複習訓練 Recurrent Training					
	3. 空服員訓練 Flight Attendant Training					
	a. 初階訓練 Initial Training					
	b. 複習訓練 Recurrent Training					
	c. 機型轉換訓練 Transition Training					
AW-9	4. 維護訓練 Maintenance Training					
	a. 機械員/修理員訓練 Mechanic/Repairman Training					
	b. 檢驗人員 Inspection Personnel Training					
	c. 地勤/保養人員訓練 Ground Handling/Servicing Personnel Training					
	d. 場站人員訓練 Station Personnel Training					
備註 Remark:						

MAR 07, 2016

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工作項次 JOB FUNCTION	階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIG	退回日期 DATE RET'D	重送日期 DATE RESUB'D	核准/接受日期 DATE APPRV'D/ ACCEP'D	參考 REF
	第三階段 文件符合階段 PHASE III DOCUMENT COMPLIANCE PHASE					
B.	評估管理人員資格 Evaluate Management Qualifications					
	1. 總經理 General Manager					
	2. 航務負責人 Director of Operations					
	3. 維護負責人 Director of Maintenance					
	4. 品管負責人員(檢驗長) Chief Inspector					
	5. 總機師 Chief pilot					
	6. 偏異要求(如適用) Request for Deviation Letter (if applicable)					
	備註 Remark:					
C.	評估公司作業手冊/程序 Evaluate Applicable Company Manuals/ Operation Procedure					
ICAO DOC. 9376	1. 航務手冊 Completed Flight Operations Manual					
AW-8	2. 航空器維護手冊 Aircraft Maintenance Control Manual					
	3. 經核准之航空器飛航手冊 Approved Airplane Flight Manufacturer'S Authority					
	4. 公司航空器操作手冊 Company Aircraft Operations Manual					
	5. 航空器檢查表 Aircraft Checklists					
	a. 正常 Normal					
	b. 不正常 Abnormal					
	c. 緊急 Emergency					
	6. 空服員手冊 Flight Attendant Manual					
	7. 簽派/飛航追蹤/航機位置標示 Dispatch/Flight Following/Locating					
	8. 場站作業(手冊) Station Operations					
	9. 公司緊急手冊 Company Emergency Manual					
	10. 機場資料/航路手冊(圖表) Airport Data & En Route Manual (chart and plates)					
	11. 機場/跑道分析手冊 Airport/Runway Analysis Manual					
	12. 最低裝備需求手冊 Minimum Equipment List					
	13. 外型差異需求手冊 Configuration Deviation List					
AW-8	14. 維護技術手冊 Maintenance Technical Manual					
	a. 航空器維護計劃手冊 Aircraft Maintenance Program Manual					

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工作項次 JOB FUNCTION	b. 機體/動力系統 Airframe/Powerplant 階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIG	退回日期 DATE RET'D	重送日期 DATE RESUB'D	核准/接受日期 DATE APPRV'D/ ACCEP'D	參考 REF
第三階段 文件符合階段 PHASE III DOCUMENT COMPLIANCE PHASE						
	c. 結構修理 Structure Repair					
	d. 零件目錄 Parts Catalogue					
AW-8 C.	e. 檢驗程序 Inspection Procedures					
	f. 製造廠/供應商手冊 Manufacture's or Vendor's Manual					
	g. 線路手冊 Wiring Manual					
	h. 翻修手冊 Overhaul Manual					
	15 加油/再加油/洩油程序(手冊) Fueling/Refueling/Defueling					
	16. 地勤作業手冊 Ground Servicing Manual					
Aw-10	17. 載重平衡管制手冊 Weight and Balance Control Manual					
ANNEX 18	18. 危險物品 Hazardous Material					
ANNEX 17	19. 保安計畫 Security Program					
AW-22	20. 可靠度管制計畫 Reliability Program					
AW-14	21. 持續適航維護計畫 Continuous Airworthiness Maintenance Program					
	22. 緊急計畫/連絡作業 Emergency Plan/Notification					
	23. 乘客簡報卡 Passenger Briefing Card					
	備註 Remark:					
ICAO DOC 8335 D.	其他評估 Other Evaluations					
AW-26	1. 航空器租賃 Aircraft Lease 0-21					
ICAO DOC 8335	2. 航務合約/協議 Operations 0-21 Contracts/Agreements					
AW-16	3. 維護合約/協議 Maintenance Contracts/Agreements					
	4. 航勤代理合約/協議 Servicing Contracts/Agreements					
AW-9	5. 訓練合約(如適用) Training Contracts-(IF Applicable)					
ATTACH. 1 OPS	6. 緊急撤離逃生演練計畫 Emergency Evacuation Demonstration Plan					
	7. 水上迫降驗證計畫 Ditching Demonstration Plan					
	8. 航空器驗證試飛計畫 Aircraft Approving Test Plan					
	9. 最後符合陳述 Final Compliance Statement					
ATTACH. AW-C OPS-H	10. 開始進行航務作業規準備作業 Initiate Operations Specs. Preparation					

AIRWORTHINESS INSPECTOR'S HANDBOOK

備註 Remark:						
工作項次 JOB FUNCTION	階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIG	開始日期 DATE STARTED	完成日期 DATE COMPL'D	核准/接受日期 DATE APPRV'D/ ACCEP'D	參考 REF
	第四階段 驗證檢查階段 PHASE IV DEMONSTRATION & INSPECTION PHASE					
A.	評估訓練執行情況 Evaluate Applicant Conducting Training					
OP-7, AW-9	1. 訓練設施 Training Facilities					
OP-7, AW-9	2. 訓練時程 Training Schedules					
OP-7	3. 飛航組員訓練 Flight Crewmember Training Evaluation					
	a. 基礎教育訓練 Basic Indoctrination					
	b. 緊急訓練 Emergency Training					
	c. 地面學科訓練 Ground Training					
	d. 飛航訓練 Flight Training					
	e. 機型差異訓練 Difference Training					
	4. 檢定機長/飛航教師 Check Airman/Instructor					
	5. 空服員 Cabin crew					
	a. 基礎教育訓練 Basic Indoctrination					
	b. 緊急訓練 Emergency Training					
	c. 地面學科訓練 Ground Training					
	6. 簽派員/飛航追蹤/航機位置標示 Dispatcher/Flight Following/Locating					
	7. 危險物品 Hazardous Materials					
	8. 保安訓練 Security Training					
AW-9	9. 維護訓練 Maintenance Training					
AW-17	a. 機械員/修理員 Mechanics/Repairman					
AW-18	b. 檢驗人員 Inspection Personnel					
AW-17	c. 地勤/保養人員 Ground Handling/Servicing					
AW-17	d. 場站人員 Station Personnel					
	備註 Remark:					
OP-10 B.	航空人員測驗及檢定給證 Airman Testing/Certification					
	1. 飛航駕駛員 Pilot					
	2. 飛航機械員 Flight Engineers					
	3. 簽派員 Dispatchers					
	4. 空服員 Flight Attendants					
備註 Remark:						

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	第四階段 驗證檢查階段 PHASE IV DEMONSTRATION & INSPECTION PHASE					
C A@-33. AW-332	航空器一致性檢查 Aircraft Conformity inspection					
	1. 經核准之機型證明資料單 Approved Type Data Sheet					
	2. 經核准之載重平衡 Approved Weight and Balance					
	3. 經核准之裝備手冊 Approved Equipment List					
	4. 重大維修及改裝 Major Repair and Alteration					
	5. 緊急裝備 Emergency Equipment					
	備註 Remark:					
OP-1 D.	主要作業基地檢查 Main Operations Base					
	1. 人員編制及組織 Staffing and Organization					
	2. 適當之手冊圖書室 Appropriate Manual Library					
	3. 簽派/飛航追蹤/航機位置標示 Dispatch/Flight Following/Flight Locating					
	4. 記錄保存 Recordkeeping					
	a. 組員訓練記錄 Crewmember Training Records					
	b. 航空人員資格記錄 Airman Qualification Records					
	c. 組員飛航及休息時間 Crewmember Flight and Rest Time					
	d. 飛航記錄 Flight and Trip Records					
	e. 組員體檢記錄 Crewmember Medical Records					
	備註 Remark:					
AW-1 E.	主要維護基地檢查 Main Maintenance Base					
	1. 人員編制及組織(維護部門及檢驗部門應分開) Staffing and Organization(separation of maintenance and inspection department)					
	2. 裝備(工具, 千斤頂, 吊掛等) Equipment(Tools, Jacks, Hoist, etc.)					
	3. 機棚廠及工場 Hangar and Work Shop					
	4. 特殊工具及試驗裝備 Special Tools and Test Equipment					
	5. 備份零件 Spare Parts					

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	第四階段 驗證檢查階段 PHASE IV DEMONSTRATION & INSPECTION PHASE					
AW-1 E.	6. 記錄保存 Recordkeeping					
AW-19	a. 航空器記錄 Aircraft Record					
AW-9	b. 維護人員訓練 Maintenance Personnel Training					
AW-9, 18	c. 檢驗人員訓練 Inspector Training (RII)					
AW-18	d. 授權 RII 檢查之檢驗員資格及授權通知 Inspector RII Qualification and Notification					
AW-1, 13	e. 工具校驗及校準 Tool Testing/Calibration					
AW-1	f. 核准之零件採購 Approved Parts Purchasing					
	備註 Remark:					
AW-3 F. OP-3	停機線及場站設施檢查 Line/Station Facilities					
	1. 人員編制及組織 Staffing and Organization					
	2. 適當之維護/或航務手冊 Appropriate Manuals for Maintenance and /or Operations					
	3. 適當之維護及作業裝備 Proper Equipment for Maintenance and Operations					
	4. 特殊工具及測試裝備 Special Tools and Test Equipment					
	5. 備份零件 Spare Parts					
OP-8	6. 簽派/飛航管制 Dispatching/Flight Control					
AW-3	7. 使用人手冊規定所須保存之記錄 Recordkeeping as Required by the Operator's Manual					
	8. 勤務裝備 Servicing Equipment					
備註 Remark:						

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	第四階段 驗證檢查階段 PHASE IV DEMONSTRATION & INSPECTION PHASE					
G. ATTACH.	緊急撤離逃生驗證 Emergency evacuation demonstration					
1 OPS	1. 完整之緊急撤離逃生演練:在該機型最大乘員人數(含組員)下應於 90 秒以內完成撤離逃生程序(註:參考民航局航務檢查員手冊附錄 A 之規定)Full-scale emergency evacuation demonstration : the evacuation process to be completed in 90 seconds or less of at least 75% of the maximum number of persons including crew					
	2. 部份之緊急撤離逃生演練:不須乘客參與,空服員就座於正常起飛位置,在發出開始信號後,航空器內緊急裝備及一半緊急逃生出口和滑梯必須能在 15 秒以內完成使用的準備(註:參考民航局航務檢查員手冊附錄 A 之規定).Partial emergency evacuation demonstration : No passenger participants are required, the flight attendant occupy their normal takeoff positions. After the initiation signal, the aircraft's emergency evacuation equipment and 50 % of the required emergency exits and slides must be ready for use in 15 seconds or less.					
	3. 組員執行所指派之工作 Crewmember Execution of Assigned Duties					
	4. 組員在撤離逃生時之位置 Crewmember Location During Evacuation					
	5. 機長之處置能力 Effectiveness of the PIC					
	6. 傷亡情況下之指揮權繼承 Command Succession in the Event of the Casualties					
	7. 組員之處置能力 Effectiveness of Crewmember					
	8. 所發生之缺點及延誤 Short Comings and Delays Encountered					

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備註 Remark:						
工作項次 JOB FUNCTION	階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIG	開始日期 DATE STARTED	完成日期 DATE COMPL'D	核准/接受日期 DATE APPRV'D/ ACCEP'D	參考 REF
	第四階段 驗證檢查階段 PHASE IV DEMONSTRATION & INSPECTION PHASE					
H. ATTACH. 1 OPS	水上迫降演練 Ditching Demonstration					
	1. 緊急裝備 Emergency Equipment					
	a. 救生艇及救生衣 Life Raft and Life Jackets					
	b. 充氣滑梯 Inflatable Slides					
	c. 緊急無線電 Emergency Radio					
	d. 照明燈光 Lights					
	2. 正確的存放緊急裝備以保持隨時可拆移使用 Emergency Equipment is Properly Stowed and Readily Removable					
	3. 防止裝備漂離生還者之方法 Means for Preventing Equipment From Drifting Away From Survivors					
	4. 滑梯, 救生背心及救生艇在時限內完全充氣 Slides, Life Jackets and Life Rafts Fully Inflate in Acceptable Time Limits					
	5. 適當且正確的使用緊急程序及相關檢查表 Emergency Procedures and Related Checklist are Adequate and Properly Used					
	6. 組員已受適當之訓練 Crew is Properly Trained					
	7. 組員已熟悉所備被指派之工作 Crewmember are Familiar With Assigned Duties					
8. 組員能依訓練方式執行工作, 並在危急情況下逃離航空器 Crewmember Can Perform Trained Duties and Evacuate Aircraft Under Critical Condition						
9. 組員能遵照安全指示以防止逃生者受到可能之傷害 Safety Precautions are Followed by the Crew to Prevent Possible Injuries to Evacuees						



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備註 Remark:

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	第四階段 驗證檢查階段 PHASE IV DEMONSTRATION & INSPECTION PHASE					
I.	航空器驗證飛行 Aircraft proving test					
	1. 計畫 Planning					
	a. 航務手冊含飛航中程序, 並依該程序 實施 Compliance with contained in the operations manual					
	b. 提供飛航組員得以安全執行飛航任務 所需之設施及裝備 The facilities and equipment provided to the flight crew to conduct the flight safely					
	c. 航務管制對飛航組員之支援 The support provided by operational control to the flight crew					
	d. 沿途機場之一般地勤作業規訂定 The general provisions made for ground handling of aircraft at airports along the routes					
AW-3 OP-3	e. 釋適當之航路設施 The adequacy of the en-route facilities					
	2. 飛航前檢查 Preflight inspection					
	a. 氣象及航路簡報 Meteorological and route briefing					
	b. 飛航計畫及燃油計算 Flight planning and fuel calculations					
	c. 飛航組員實施航空器外部檢視 Walk					

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	around inspection of flight crew					
d.	載重平衡程序 Weight and balance procedures					
e.	飛航計畫提報及航務簽放 Flight planning and operational release					
f.	客艙檢查 Cabin inspection					
g.	與地勤人員之協調(引擎起動/航機後推) Coordination with ground crew (startup/pushback)					
備註 Remark:						

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	<b>第四階段 驗證檢查階段</b> <b>PHASE IV DEMONSTRATION &amp; INSPECTION PHASE</b>					
I.	3. 滑行/起飛 Taxi/take-off					
	a. 檢查表之使用 Use of checklist					
	b. 滑行及使用機場圖表 Taxing and use of airport chart					
	c. 獲得航管許可 Acceptance of ATC clearance					
	d. 計算臨界起飛速度 Calculations of critical speeds for take-off					
	e. 對組員及旅客之簡報 Briefing of flight crew and passengers					
	4. 飛航中(駕駛艙)Inflight(cockpit)					
	a. 遵守法規及檢查表 Compliance with regulations and checklist					
	b. 組員紀律, 協調及警覺性 Crew discipline, coordination and vigilance					
	c. 適當之陸空通訊 Adequacy of air ground communication					
	d. 組員使用安全肩帶 Crew use of safety harness					
	e. 旅客通告(安全帶, 抽煙等)Passenger notification (seat belts, smoking, etc.)					
	f. 飛航駕駛員之適職能力(手控及自動飛行)Pilot flight proficiency (manual and autopilot)					
	g. 遵循作業最低限度 Adherence to the operating minima					
	h. 對模擬緊急/狀況之處置 Handling of simulated emergencies/problems					
備註 Remark:						

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	第四階段 驗證檢查階段 PHASE IV DEMONSTRATION & INSPECTION PHASE					
I.	5. 飛航前/飛航中客艙空服員之工作 Preflight/inflight cabin attendants duties					
	a. 客艙行李之置放 Stowage of cabin baggage					
	b. 安全帶及緊急程序 Seat belts and emergency procedures					
	c. 緊急裝備及逃生艙門之使用 Location and use if emergency equipment/exits					
	d. 起飛及降落時椅背之豎直 Seat back positioning for take-off and landings					
	e. 盥洗室之使用限制 Restrictions on use of lavatories					
	f. 空服員對授權座位之使用 Use of authorized seats by cabin attendants					
	g. 起飛及降落時電子裝備之使用 Use of electronic equipment during take-off and landings					
	6. 進場及落地 Approach and landing					
	a. 檢查表之使用及乘客通告 Use of checklist and passenger announcements					
	b. 遵守航管之指示 Compliance with ATC instructions					
	c. 速度控制 Speed control					
	d. 助航設施之使用 Use of navigation aids					
	e. 進場程序 Approach procedures					
	f. 著陸, 滾行及煞車 Touchdown, rollout and braking					
	g. 滑行及停機 Taxi & parking					
備註 Remark:						

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	<b>第四階段 驗證檢查階段</b> <b>PHASE IV DEMONSTRATION &amp; INSPECTION PHASE</b>					
I.	7. 飛行後(駕駛艙及客艙)Post-flight(cockpit & cabin)					
	a. 檢查表之使用 Use of checklist					
AW-19	b. 回報及記錄航空器之運作狀況 Reporting and logging of aircraft serviceability					
	c. 完成記錄簿之填寫 Completion of logbook					
	d. 回報重要作業事故(航機接近, 鳥擊, 雷擊閃電, 客艙緊急狀況及乘客受傷等) Reporting of significant operational incidents (near misses, bird strikes, lighting strikes, cabin emergencies, passenger injuries, etc.)					
	e. 組員休息(如有需要)Crew rest if required					
	f. 中間停留站之地勤服務 Ground services for intermediate stops					
J.	交通部財務主管單位之證明(如需要)Proof of MOTC Economic Authority (if required)					
備註 Remark:						

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工作項次 JOB FUNCTION	階段名稱/檢查項目 PHASE/CHECK ITEM	檢查員簽名 CPM SIGNATURE	完成日期 DATE COMPLETED	參考 REFERENCE
第五階段 給證階段 PHASE V CERTIFICATION PHASE				
A. ATTACH. E	核准航務作業規範 Approve operations specifications			
B.	將航務作業規範發給受檢完成之航空公司 Present operations specifications to certificate holder			
	備註 Remark:			
C.	準備檢定報告 Prepare certification report			
	1. 應具備之資料 Assemble report			
	a. 申請前之意願陳述 Pre-application statement of intent			
	b. 檢定工作輔助表，含所有執行工作項次的檢查表 Certification job aid Include as All Signed JFs'			
	c. 正式申請信函 Formal application letter			
	d. 工作進度表 Schedule of events			
	e. 最後符合陳述 Final compliance statement			
	f. 驗證飛行評估報告 Proving test evaluation report			
	g. 緊急撤離逃生驗證報告 Ditching demonstration report			
	h. 水上迫降演練評估報告 Emergency evacuation demonstration report			
	i. 航務作業規範影本 Copy of operations specifications			
	j. 民用航空運輸業許可證書影本 Copy of certificate			
	k. 困難問題彙總 Summary of difficulties			
	l. 檢定程序之改進建議 Suggestions to improve certification process			
	2. 檢定給證報告之傳會及歸檔 Distribute Report and file			
D.	擬定後續定期檢查及監督計畫 Develop post certification surveillance and inspection program			
備註 REMARK				

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航務作業規範工作進度表 REGULATION 07-03B SCHEDULE OF EVENTS				
航空公司名稱(申請人): OFFICAL NAME OF COMPANY		航空公司(申請人)地址 LOCATION ADDRESS OF APPLICANT		
民用航空運輸業許可證號: CERTIFICATION NO.		通信地址(如異於航空公司地址) MAILING ADDRESS		
預定送審日期 Scheduled date of submission	正式申請階段 Formal Application Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	正式申請函 1. Formal Application Letter			
	工作進度表 2. Schedule of Events			
	公司一般運作手冊 3. Company General Operations Manual			
	公司一般維護手冊 4. Company General Maintenance Manual			
	新進人員訓練課程 5. Initial New Hire Training Curriculum (組員及簽派員) (Crewmembers & Dispatchers)			
	基礎教育 a. Basic Indoctrination			
	緊急訓練 b. Emergency Training			
	地面學科訓練 c. Ground Training			
	飛航訓練 d. Flight Training			
	相關合約協議影本 6. Documents of Purchase, Contracts Leases and/or Letters of Intent			
	主管人員之資歷 7. Management Qualification Resumes			
	初步符合法規之陳述 8. Initial Compliance Statement			

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預定送審日期 Scheduled date of submission	文件符合階段 DOCUMENT COMPLIANCE PHASE	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	1. 飛航組員訓練手冊 Crewmember Training Manual			
	a. 基礎教育訓練 Basic Indoctrination			
	b. 緊急訓練 Emergency Training			
	c. 地面學科訓練 Ground Training			
	d. 飛航訓練 Flight Training			
	e. 複習訓練 Recurrent Training			
	f. 機型轉換/昇等訓練 Transition/Upgrade Training			
	g. 機型差異訓練 Differences Training			
	h. 保安訓練 Security Training			
	i. 危險物品 Hazardous Material Training			
	j. 檢定機長/飛航教師訓練 Check Airman/Instructor Training			
	2. 簽派員訓練手冊 Dispatcher Training Manual			
	a. 初階訓練 Initial Training			
	b. 複習訓練 Recurrent Training			
	3. 空服員訓練手冊 Flight Attendant Training Manual			
	a. 初階訓練 Initial Training			
	b. 複習訓練 Recurrent Training			
	c. 機型轉換訓練 Transition Training			
	4. 維護訓練手冊 Maintenance Training Manual			
	a. 機械員/修理員訓練 Mechanic/Repairman Training			
	b. 檢驗人員 Inspection Personnel Training			
	c. 地勤/保養人員訓練 Ground Handling/Servicing Personnel Training			
	d. 場站人員訓練 Station Personnel Training			
手冊(MANUALS 5-25)				
	5. 航務手冊 Completed Flight Operations Manual			
	6. 航空器維護能力手冊 Completed Aircraft Maintenance Control Manual			
	7. 經核准之航空器飛航手冊 Approved Airplane Flight Manual			



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預定送審日期 Scheduled date of submission	文件符合階段 DOCUMENT COMPLIANCE PHASE	接收/完成日期 Data Received/Accmp.	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	8. 公司航空器操作手冊 Company Aircraft Operations Manual			
	9. 航空器檢查表 Aircraft Checklists			
	a. 正常 Normal			
	b. 不正常 Abnormal			
	c. 緊急 Emergency			
	10. 空服員手冊 Flight Attendant Manual			
	11. 簽派/飛航追蹤/航機位置標示 Dispatch/Flight Following/Locating			
	12. 場站作業(手冊) Station Operations			
	13. 公司緊急手冊 Company Emergency Manual			
	14. 機場資料/航路手冊(圖表) Airport Data & En Route Manual (chart and plates)			
	15. 機場/跑道分析手冊 Airport/Runway Analysis Manual			
	16. 最低裝備需求手冊 Minimum Equipment List			
	17. 外型差異需求手冊 Configuration Deviation List			
	18. 維護技術手冊 Maintenance Technical Manual			
	a. 航空器維護計劃手冊 Aircraft Maintenance Program Manual			
	b. 機體/動力系統 Airframe/Powerplant			
	c. 結構修理 Structure Repair			
	d. 零件目錄 Parts Catalogue			
	e. 檢驗程序 Inspection Procedures			
	f. 製造廠/供應商手冊 Manufacture's or Vendor's Manual			
	g. 線路手冊 Wiring Manual			
	h. 翻修手冊 Overhaul Manual			
	19 加油/再加油/洩油程序(手冊) Fueling/Refueling/Defueling			
	20 地勤作業手冊 Ground Servicing Manual			
	21 載重平衡管制手冊 Weight and Balance Control Manual			
	22 危險物品 Hazardous Material			
	23 保安計畫 Security Program			
	24 可靠性管制計畫 Reliability Program			
	25 持續適航維護計畫 Continuous Airworthiness Maintenance Program			

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預定送審日期 Scheduled date of submission	文件符合階段 DOCUMENT COMPLIANCE PHASE	接收/完成日期 Data Received/Accmp.	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	26 緊急計畫/連絡作業 Emergency Plan/Notification			
	27 乘客簡報卡 Passenger Briefing Card			
	28 其他資料 Other Evaluations			
	a. 航空器租賃 Aircraft Lease			
	b. 航務合約/協議 Operations Contracts/Agreements			
	c. 維護合約/協議 Maintenance Contracts/Agreements			
	d. 航勤代理合約/協議 Servicing Contracts/Agreements			
	e. 訓練合約 Training Contract(IF Applicable)			
	f. 緊急撤離逃生演練計畫 Emergency Evacuation Demonstration Plan			
	g. 水上迫降演練計畫 Ditching Demonstration Plan			
	h. 航空器驗證試飛計畫 Aircraft Approving Test Plan			
	i. 環境評估 Environmental Assessment			
	j. 偏離要求 Exemption/Deviation Requests			
	29 最後符合陳述 Final Compliance Statement			
	30 航務作業規範 Operations Specifications			
備註 REMARK				

## AIRWORTHINESS INSPECTOR'S HANDBOOK

預定檢查日期 Date Item Accomplished	驗證檢查階段 DEMONSTRATION PHASE	完成檢查日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	訓練設施 1. Training Facilities			
	訓練時程 2. Training Scheduled:			
	飛航組員 a. Flight Crewmembers:			
	(1)基本教育 Basic Indoctrination			
	(2)緊急訓練 Emergency Training			
	(3)地面學科訓練 Ground Training			
	(4)飛航訓練 Flight Training			
	(5)機型差異訓練 Differences Training			
	檢定機長 b. Check Airmen			
	c. 空服員 Cabin Crew:			
	(1)基本教育 Basic indoctrination			
	(2)緊急訓練 Emergency Training			
	(3)地面學科訓練 ground Training			
	簽派員/飛航追蹤/航機位置標示 d. Dispatcher/Flight Following /Locating			
	危險物品 e. Hazardous Materials			
	保安 f. Security			
	維護訓練 g. Maintenance Training			
	機械員/修理員 (1). Mechanics/Repairmen			
	檢驗人員 (2). Inspection Personnel			
	地勤/保養人員 (3). Ground Handling/Servicing			
	場站人員 (4). Station Personnel			
	航空器一致性檢查 3. Aircraft Conformity Inspection			
	主要作業基地查 4. Main Operation Base			
	主要維護基地檢查 5. Main Maintenance Base			
	停機線及場站設施檢查 6. Line/Station Facilities			
	緊急撤離逃生訓練 7. Emergency Evacuation Demonstration			
	航空器驗證飛行計劃 8. Proving Test Plan			
	交通部財務主管單位證明 9. Proof of MOTC Economic Authority			

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# PROCEDURE 2 CERTIFICATION AND OPERATION OF AVIATION MAINTENANCE TECHNICIAN SCHOOLS

## CHAPTER 1. INTRODUCTION

### 1. GENERAL.

The CAA approved program is frequently only a part of a school's overall instruction program (that is, baccalaureate degrees that include an CAA Airframe and Engine Mechanic Certificate). The requirements of CAR 147 should not be interpreted as applying to any courses other than those required by the CAR 147 curriculum.

### 2. BACKGROUND.

CAR 147, Aviation Maintenance Technician Schools (AMTS), specifies requirements for the certification and operation of an AMTS. The regulation includes both the curriculum requirements and operating rules for all certificated AMTS.

### 3. DISCUSSION.

An AMTS is an educational facility certificated by the CAA to train aviation maintenance technicians (AMT) for careers in the airline industry, in aviation maintenance facilities, and in commercial and general aviation. The knowledge, skills, and abilities (KSA) required of aviation technicians are considerable and demand high quality training. Therefore, the CAA requires high standards of AMTS.

**a.** In terms of the time and costs involved, the development and certification of an AMTS involve a considerable undertaking. From initiation of the certification process to issuance of the certificate, the outlay of time and capital for required facilities, equipment, and curriculum development can be significant.

**b.** AMTS applicants are encouraged to exceed the CAA minimum standards for facilities, curriculum, teaching levels, etc. For example, AMTS applicants are encouraged to teach subjects beyond those required by the regulations; for example, composite material repair, solid state electronics, nondestructive inspection techniques, and built-in test equipment. However, when an AMTS chooses to exceed CAA minimum standards, this new standard must be approved by the CAA and, if approved, becomes part of a CAA approved curriculum. The new standard becomes a mandatory compliance requirement and remains a mandatory requirement until the CAA is informed of a change by the school.

**c.** Since an AMTS is certificated and inspected by the CAA, satisfaction of CAR 147 requirements should be the primary concern of an AMTS. When Republic of China (ROC) educational requirements conflict with the CAA's regulation of an AMTS, those requirements must be resolved to satisfy CAR 147. In other words, CAA standards take precedence over other requirements.

### 4. GLOSSARY OF TERMS.

This listing contains clarifications of some of the terms defined in CAR 147. When used within the context of CAR 147, these terms apply to AMTS requirements and are not necessarily used the same way they are used in other CAA regulations.

**a. Accreditation.** As referenced in CAR 147, this term refers exclusively to schools accredited within the ROC.

**b. Approved Instructors.** Non-CAA certificated instructors who have been approved by the CAA to teach pertinent subjects at a particular AMTS. The AMTS must submit to the CAA a list of instructions and substitute instructors. The list must specify which subjects will be taught by each

instructor. The CAA will then approve or disapprove each instructor individually. An instructor who does not hold an CAA mechanic certificate cannot be approved to teach subjects other than certain general curriculum subjects, such as mathematics, physics, mechanical drawing, etc. The list of approved instructors must be maintained by the AMTS.

**c. Certificated Instructors.** Those instructors who hold CAA mechanic certificates and the ratings appropriate for the subjects to be taught.

**d. Certification.** As referenced In CAR 147, this term refers to AMTS certificated by the CAA. AMTS are certificated exclusively within the ROC.

**e. Check.** To verify proper operation. A check is performed to verify proper operation without the item necessarily qualifying for return to service condition. In an AMTS, the item checked does not have to be the item overhauled.

**f. Common Handtools.** Small, ordinary tools such as ratchets, sockets, etc.

**g. Instructional Aids.** Equipment used to provide instruction. Examples include diagrams, visual aids, computers, interactive software, aircraft, mockups of aircraft, engines, components, etc., as well as actual components, such as magnetos, fuel controls, etc. An instructional aid does not have to meet return to service standards.

**h. Instruction Hour.** The educational unit hour, as used by an AMTS, that consists of a time period of 50 - 60 minutes. This instructional time period conforms to the existing practices at many education institutions.

**i. Laboratory.** Facilities for providing instruction in general principles that may require student demonstrations or participation. Determination of what laboratory equipment will be required depends on the subject taught and the teaching level at which it is taught.

**j. Overhaul.** To disassemble, inspect, repair as necessary, and check in accordance with CAA acceptable instructions; that is, manufacturers' maintenance manuals, CAA directives, and service bulletins. For an AMTS, the overhaul requirement in a teaching scenario does not require the overhauled component to meet return to service mechanical tolerances. For example, a runout turbine powerplant may be adequate to teach students overhaul techniques but could present a danger if operated.

**k. Practical Project.** A "hands-on" assignment that requires the use manipulative skills taught at a teaching level of either 2 or 3. A practical project does not include nonmanipulative activities such as book reports. However, for certain required general subjects such as maintenance publications, the use of CAA directives, manufacturers' data, etc., constitutes a practical project.

**l. Ratings.** An AMTS may be certificated for the following ratings: airframe, engine, or combined airframe and engine. The general portion of the required curriculum is not a rating, but it is a required part of all the ratings.

**m. Return to Service.** As used in CAR 147, with respect to skills developed, to make a part or component airworthy, or to be in an airworthy condition; that is, instructional aid.

**n. Shop.** Facilities for providing instruction on projects taught at teaching Levels 2 or 3. The shop environment should resemble a typical aviation repair facility. However, the school is primarily a training and educational facility and must reflect that function.

**o. Shop Equipment.** Machinery such as fabricating devices, sheet metal equipment, battery chargers, etc.

**p. Special Tools.** Highly specialized tools such as tensionometers, micrometers, torque wrenches, etc.

**q. Teaching Levels.**

**(1) Level 1.** Level 1 requires knowledge of general principles, but no practical application; no development of manipulative skill; and instruction by lecture, demonstration, and discussion. This teaching level generally refers to classroom instruction and does not require practical application. Teaching aids or instructional equipment may include charts, books, diagrams, or other visual teaching aids. If an AMTS chooses to teach Level 1 courses incorporating actual components, the components do not have to be operational.

**(2) Level 2.** Level 2 requires knowledge of general principles and limited practical application; development of sufficient manipulative skill to perform basic operations; and instruction by lecture, demonstration, discussion, and limited practical application. This teaching level requires some hands-on manipulative skills and their accompanying actual or simulated components/equipment, but still may be taught primarily in the classroom environment.

**(3) Level 3.** Level 3 requires knowledge of general principles; performance of a high degree of practical application; development of sufficient manipulative skill to accomplish return to service; and

instruction by lecture, demonstration, discussion, and a high degree of practical application. This teaching level requires hands-on skill, as well as sufficient and appropriate instructional aids to train the student to develop manipulative skills sufficient to simulate return to service mechanical skill. At this level, the teaching aids must be similar to or be the actual items of equipment on which the student is expected to develop required skill levels. A Level 3 subject cannot be taught solely by lecture in the classroom; the appropriate training aids and hands-on experience must be used.

**r. Troubleshoot.** To analyze and identify malfunctions and to identify the source of trouble in an airframe, powerplant, or aircraft component. For the purposes of AMTS, the item of equipment or simulator training aids must be in operating condition. For example, a turbine powerplant must be operational in order for the student to troubleshoot it.

## **CHAPTER 2. CERTIFICATION REQUIREMENTS FOR SCHOOLS CERTIFICATED UNDER CAR 147**

### **5. AMTS RATINGS.**

An AMTS may be CAA certificated for the following ratings: airframe, engine, and/or combined airframe and engine. The general section of the curriculum is not a rating but its completion is a prerequisite of eligibility for ratings. Schools certificated only for combined airframe and engine ratings cannot grant single ratings such as airframe or engine. Students enrolled in a combined curriculum are required to finish the entire combined curriculum before eligibility for CAA written testing.

### **6. DURATION OF CERTIFICATE.**

An AMTS' CAA certificate remains in effect until it is surrendered, suspended, or revoked. However, a change in location, facilities, and ratings or the addition or deletion of a rating will require the school to be recertificated by the CAA.

### **7. DISPLAY OF CERTIFICATE.**

The AMTS is required to display its CAA certificate in a prominent location that is accessible and visible to the public. The certificate must be made available for inspection by the CAA.

### **8. ADVERTISING.**

In all advertising and brochures, an AMTS is required to indicate that it is an CAA certificated school. Course literature must clearly distinguish between those courses that have been approved by the CAA and those that have not. For example, an CAA certificated AMTS that is part of a junior college system may offer courses in aviation management but must clearly state in its literature that those courses are not CAA approved.

### **9. INSPECTION REQUIREMENTS**

When an AMTS applies to the CAA for certification, it enters into a regulatory agreement with the CAA to allow itself to be inspected by the CAA at any time. Normally, a CAA inspection is conducted approximately every 6 months to determine if the school continues to meet its certification requirements. However, the CAA will perform more inspections if required. In all cases, an AMTS will be inspected by the CAA at least once each year. See CAR 147.43.

### **10. CURRICULUM REQUIREMENTS.**

The AMTS curriculum is comprised of the courses needed to meet CAR 147 requirements. The curriculum is the single most important document an AMTS applicant will submit. This is basically an agreement between the CAA and the AMTS that shows how the AMTS will train students for certification as AMTs, and how it will meet the academic and regulatory requirements of the regulations. Elements comprising an AMTS curriculum can vary widely. However, many AMTS

include all or some of the required operating rule compliance documents in the curricula. Since these documents must be supplied to the CAA in any case, this has an advantage in that it incorporates all CAR 147 school requirements in a single document. As revisions are required periodically, and as those revisions must be CAA approved, curriculum documents should have a format that permits easy revision. The curriculum document should have a revision control chart or page that indicates the location of each revision and includes the approving CAA official's signature.

**a. Curriculum Background.** CAR 147.21 provides the minimum curriculum requirements. Maintenance of curriculum requirements is stated in CAR 147.38.

(1) An AMTS is required to adhere to its approved curriculum. Any CAR 147 course material the school wishes to add must be incorporated into the approved curriculum and approved by the CAA before it may be used. This does not prohibit an AMTS from teaching non-CAA approved courses such as refresher courses or academic courses required to complete a degree program. However, those courses must be clearly distinguishable from CAA approved AMTS courses.

(2) An AMTS should strive to keep its approved AMTS curriculum current with industry needs by revising courses as appropriate. These revisions require CAA approval before they can be implemented.

(3) Practical projects, referred to in CAR 147.21(d), include all functions specified in the curriculum that involve hands-on tasks. Therefore, practical projects will include virtually any task taught at Levels 2 or 3 since all of these require some practical application, as specified in CAR 147 Appendices.

**b. Curriculum Development.** Curriculum development generally progresses through several stages. These stages are described in the following chapter. Practical examples may be found in Appendix 1.

(1) **Stage 1.** The first stage is to conceptualize the KSAs that an aviation mechanic must acquire in order to become certificated by the CAA..

(2) **Stage 2.** The second stage of curriculum development involves identifying which specific tasks must be performed, determining the specific performance standard that must be reached for each task in each subject area, and assigning the amount of instructional time in theory, laboratory and shop that will achieve that performance standard.

(3) **Stage 3.** The third stage in curriculum development must produce a curriculum that contains all the elements required to teach, test, and conform to the rule. Stage 3 must also develop practical projects and objective project grading criteria. Practical projects and associated tests may be presented within the main body of the curriculum or in associated workbooks, workbook supplements, or project guides. Wherever the practical projects are presented, they ultimately become part of an CAA approved curriculum and must be submitted to the CAA for approval. The testing and evaluation of practical projects may represent the most difficult task in curriculum development. No one method is "best." Instead, there are a number of methods used by AMTS that have proven to be valid. One important concept to keep in mind is that the KSAs required of an AMT student must be validated by the testing procedures used when each required project is performed. Appendix 1 offers a brief description of practical project guides and the various methods that AMTS use to objectively grade practical projects. Minimally, a complete curriculum:

(i) Conforms to CAR 147.

(ii) Provides a method to teach the KSAs an AMT student is required to learn.

(iii) Has objectives that are clearly expressed.

(iv) Provides objective test criteria that conform to subjects studied both in shop/laboratory and in the classroom.

(v) Shows the appropriate teaching level and number of required shop and theoretical hours to complete the program for a given rating.

(vi) Includes a complete description of each practical project and the methods and materials required to accomplish each one.

(vii) Shows the relationship of practical projects to the required subjects.

**c. Curriculum Components.** An acceptable CAR 147 curriculum will consist of at least the following elements:

(1) Subjects conforming to Appendices B, C, and D.

(2) Course content conforming to Appendices A, B, C, and D.

(3) Teaching level requirements conforming to Appendix A.

(4) Objective testing and grading criteria.



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- (5) Classroom or theory hours conforming to CAR 147.21.
- (6) Shop or laboratory hours conforming to CAR 147.21.
- (7) Total number of hours required for successful completion.
- (8) A schedule of required tests which indicates the sequence of examinations for each subject in the curriculum.
- (9) The order of instruction for each subject element.

### **d. Additional Requirements.**

(1) Each subject item must be taught at least at the indicated level of proficiency as defined in CAR 147 Appendices. When the school wishes to teach a subject item to a level beyond the requirements, the teaching level must be approved by the CAA and made part of the CAA approved curriculum. As an example, a subject required by CAR 147 to be taught at Level 1 may be taught at teaching Level 2 by a school that has obtained CAA approval at a level beyond the requirements. Subject items cannot be taught at a level less than that shown in the CAA approved curriculum or less than those shown in the CAR 147 Appendices.

(2) Additional subjects/courses required by the school for its own purposes; that is, degree program subjects such as geography, should not be submitted for CAA approval as part of the curriculum.

(3) Subjects such as basic aerodynamics or theory of flight can be taught within pertinent, related subjects such as physics, aircraft rigging, etc. This would not necessarily increase required instruction hours.

(4) The teaching of additional subject material, beyond the requirements of CAR 147, Appendices B, C, and D, may require additional instruction hours beyond those required by CAR 147.21.

**e. Curriculum Focus.** Many AMT schools enhance portions of their curricula to develop graduates who are directed toward particular areas of the aviation industry. Examples are schools that train graduates specifically for commercial airlines, helicopter operation, repair stations, agricultural aircraft operations, etc. Curricular enhancement generally results in a curriculum with more hours of instruction than the minimum specified by CAR 147.21 for airframe and engine. Schools with directed curricula may be permitted by the CAA to reduce teaching hours (but not teaching levels) in areas they want to de-emphasize and increase teaching hours (and sometimes teaching levels) in areas targeted for enhancement. Several examples of focused curricula can be:

(1) **Example 1.** A small AMTS in a rural area may want to direct AMT students toward general aviation and agricultural applicator aircraft operations. In this case, airframe subjects such as wood, dope, fabric, welding, rigging, and ground handling would be emphasized by increasing the teaching hours and perhaps teaching levels for these subjects. Engine courses such as Propellers and Reciprocating Powerplants, including radial and opposed, would also be emphasized in the same ways and further by exploring better or more efficient instruction and/or methods. On the other hand, turbine engines, electronics, and air conditioning may be reduced in teaching hours. CAR 147 does not permit a reduction in teaching level.

(2) **Example 2.** A large AMTS in a metropolitan area may concentrate on supplying AMT students for major airlines. This AMTS would tend to emphasize areas such as turbine engines, nondestructive inspection, air conditioning systems, corrosion control, electronics, and airline maintenance systems. This AMTS may want to reduce its teaching hours in wood, dope, fabric, welding, and reciprocating engine subjects.

(3) In both examples, the number of teaching hours for certain subjects may be either reduced or increased, as appropriate. However, course content cannot be lowered in teaching levels, and the number of teaching hours for each subject would have to have CAA approval. It is obvious from this discussion that it is permissible to concentrate curricula toward certain areas in order to prepare the students for the appropriate service market. It is recommended that the AMTS develop its curricula direction during the initial certification.

(4) It is important to note that the teaching level of each subject in the curriculum directly affects the number of hours required to teach that subject. An AMTS should be aware that it must offer a sufficient number of hours for each subject in order to permit an average student to perform at the required subject level.

**f. Curriculum Format.** There is no format specifically required for a curriculum. However, as testing is part of the teaching validation process, the curriculum is required to show testing and grading procedures (see CAR 147.21(d)(3)).

**g. Hours of Instruction.** The number of hours of instruction offered for any rating must be at least the minimum specified by CAR 147.21. The school may offer more hours of instruction than the CAA requires. The following blocks of time are not to be included in calculating the minimum number of instructional hours specified in CAR 147.21:

- (1) Time used to take the CAA oral and practical test.
- (2) Time spent in taking the CAA written test or time spent registering for the test, etc.
- (3) Time set aside for CAA test review and testing at the conclusion of the course. This is not to preclude review and testing for curriculum courses but to differentiate between the time spent in learning approved curriculum material and that spent in review for the CAA test.
- (4) Time used for lunch, breaks, class changes, etc.

**h. Order of Instruction.** The curriculum should list the order of course progression in a logical sequence for each rating offered. For example, Basic Electricity would be completed before taking Aircraft Electrical Systems.

**i. Curriculum Structure.** An AMTS with ratings of airframe or engine, but not combined airframe and engine, is required to have a clearly defined general subject curricula. It is recommended that the general curriculum follow the format prescribed in CAR 147, Appendix B. This will ensure that a student graduating from one rating curriculum will meet the CAA requirements to receive the same general curriculum courses that a student graduating from another rating curriculum will receive (see Appendix 4).

**j. Testing and Grading.** Testing should be included as part of the required curriculum hours and must be directly related to the subject matter covered (see Appendix 3).

(1) Passing grades must be sufficient to achieve the required teaching level in CAR 147. Within the requirements, AMTS can set their own standards for passing grades in both shop and the classroom. Theoretical portions may have different grading standards from those required in shop classes. A common academic standard for passing is a minimum score of 70 percent. CAA written tests also use the 70 percent standard. An AMTS may choose to require a different minimum passing grade, although many AMTS elect to use the 70 percent passing standard.

(2) All theoretical and practical portions of each subject listed in the curriculum are required to be individually passed to the AMTS approved grading standard. Each practical project must also be separately passed to the approved standard. It follows that students must complete all required shop projects with passing grades. Practical project testing and grading criteria must be explicit. The requirements for successful completion must be sufficient to maximize objective grading and reduce any subjective project grading to an absolute minimum.

(3) Upon completion of each curriculum subject, a test must be scheduled. In addition, at the school's discretion, quizzes may be scheduled at any time. From an educational standpoint, it is more effective and appropriate to schedule a test after a subject unit such as Welding rather than after a comprehensive subject such as Airframe Structures that contains Welding and six other subject units. When testing for subjects that have many hours of instruction; that is, Sheet Metal Structures, an AMTS should consider planning more than one test or quiz during the instructional unit.

(4) The AMTS should have a system to provide test security. This system may include provisions for regular test changes and secure storage of tests and quizzes.

**k. Practical Application Projects.**

(1) The curriculum must list each of the practical projects that must be completed for each subject item. There must be a sufficient number of practical projects to address the requirements of CAR 147 (Appendices B, C, and D, as applicable). The curriculum should include enough detail to identify the practical projects for the correct teaching level and to clearly define performance standards and objective grading criteria.

(2) The AMTS must specify the teaching level (either 2 or 3) for each practical project to be covered in each subject item. The minimum teaching level is specified in CAR 147 Appendices. If the teaching level for practical projects is to exceed those requirements, it must be specified as such in the curriculum.

(3) The curriculum must show an appropriate amount of time for an average student to complete each project.

(4) The curriculum should be designed so that each task in each subject item is accomplished. For example, if a subject element listed in the appendices requires that the student inspect and repair to accomplish a Level 2 or Level 3 subject, a project requirement for both inspection and repair must be included in the curriculum. It is possible that one project may satisfy all the requirements for that subject element.

(5) CAR 147.21(e) requires that the overall curriculum must be taught at least 50 percent in the shop or laboratory. However, not every subject item lends itself to 50 percent shop work. The curriculum should be designed so that shop and theory are balanced as appropriate to the subject item being taught. An AMTS should avoid structuring courses that are artificially organized to meet the 50 percent requirement.

**l. Makeup Provisions.**

- (1) An AMTS must specify its provisions for the evaluation of students after failure.
- (2) The curriculum must show the number of hours of allowed absences.
- (3) All classroom material missed during allowed absences shall be made up in the same subject area.
- (4) All practical projects missed during allowed absences shall be made up. These shall be either the same projects missed or those that are very similar. Projects must be completed according to the approved grading standards.

(5) Absences exceeding the number of excused hours that are allowed by the AMTS or absences that are not excused require that portion of the curriculum to be retaken.

**m. Revisions to the Curriculum.** Changes to an approved curriculum must be approved by the CAA before an AMTS can implement them. Changes in the curriculum may include changes in any of the following:

- (1) Teaching level.
- (2) Hours of instruction.
- (3) Business hours during which instruction is conducted.
- (4) Testing/grading criteria.
- (5) Makeup provisions.
- (6) Course content.
- (7) Equipment or facilities affecting instruction in theoretical subjects or the accomplishment of practical projects.
- (8) Order of instruction, sequence in which subjects would be taught.
- (9) Addition or deletion of a rating.
- (10) Changes in the student-to-teacher ratio.

**n. Crediting Procedures for Previous Instruction or Experience.** The AMTS should use either a reliable method of evaluating a student's instruction or an entrance test to ensure that previous instruction is comparable to that offered by the crediting school. When not using an entrance test, an AMTS should use authenticated transcripts, catalogs, course descriptions, and other documents to determine the credit to be granted.

(1) Crediting for the General Curriculum. When a student successfully completes a course of study for one rating and obtains that rating, that course of study will have included the general portion of the curriculum. When that student returns to the AMTS to study for a second rating after having graduated from the course and obtained the first rating, the student will not have to retake the general portion of the curriculum. This applies providing that the general portion is clearly separate and distinct from either the airframe or the engine portions and conforms to the requirements of CAR 147, Appendices A and B. (See Appendix 2.)

(2) Except for certain mitigating circumstances, if a certificated AMTS is under suspension by the CAA, courses taught during the suspension period cannot be credited retroactively, even if the school becomes recertificated later.

(3) An AMTS applicant may not teach students as an AMTS before CAA certification and then give credit for that training after the school becomes certificated.

(4) An AMTS can choose to credit a student with instruction that was satisfactorily completed at another AMTS before or after its CAA certification, other than the crediting school (see CAR 147.31(c)(1)(iv)). For example, this prohibits an institution teaching nonaviation courses (such as diesel mechanics) from granting those credits to students taking an aviation maintenance course at the same institution. This does not apply to schools that are not eligible for CAA certification; that is, foreign schools. See paragraph 20, Foreign Schools.

(5) Crediting Previous Instruction from Other Schools (Nonaviation Maintenance Technician Schools, Accredited Only). In general, AMTS that are not CAA certificated, credit may be granted only for a limited range of subjects that apply to the general portion of the curriculum; that is, Mathematics, Basic Physics, and similar subjects.

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(6) Crediting Previous Instruction from ROC Military Technical Schools. If an AMTS chooses to grant such credit, it may be granted only on the basis of an entrance test, as specified in CAR 147.31(c)(2)(iii).

(7) Credit for Previous Experience (Military and Civilian). As a rule, creditable previous mechanic experience must be aviation maintenance experience comparable to the required AMTS curriculum subjects. For example, a person applying for credit for the aircraft Weight and Balance subject area on the basis of experience as a military aircraft loadmaster might be granted experience credit in that specific area but not for the aircraft Sheet Metal Structures subject area. Credit for all previous aviation maintenance technician experience must be documented and demonstrated by testing. The test must be equal to the test given to students who complete AMTS comparable required curriculum subjects.

### 11. FACILITIES.

The instructional aids, shop equipment, and physical layout of the building must meet the requirements outlined in CAR 147.15, 147.17, and 147.19. The applicant should keep in mind that the facility must constitute an environment suitable for learning. Distractions from learning, such as excessive noise, dust, fumes, heat, cold, clutter, etc., must be considered during development of the AMTS facility.

a. Facilities must be of a size adequate for the number of CAA authorized students to accomplish any of the shop/laboratory projects designated for that area and all classroom instruction.

b. Facilities must be located and classes scheduled so that students can travel between classes without cutting into instructional time. An AMTS should avoid scheduling situations in which the students cannot go from one class to another within the time the school specifies for class transit.

c. The school should ensure that the shop and laboratory floors are free from clutter, such as extension cords and air hoses.

### 12. FACILITY LAYOUT.

All facilities will have to conform to local codes. Discussion of those requirements is beyond the scope of this Advisory Circular. The layout of the AMTS facilities will be influenced by the ratings the school plans to obtain. The following sections provide basic information on facility layout according to the requirements of each subject area.

a. **General Subjects (CAR 147, Appendix B).** The facility layout should ensure that lead-acid and nickel-cadmium battery charging stations are appropriately isolated from each other. Laboratory storage facilities and electrical/laboratory work stations must be appropriate. Heat treatment furnaces and metal working equipment must be safe and well ventilated. Nondestructive inspection equipment (including magnetic particle inspection equipment) should be of a design suitable for inspection of aircraft components, and high pressure fluid line and pressure hose test devices must be safe to use.

b. **Airframe Subjects (CAR 147, Appendix C).** The shop layout must provide painting and doping facilities that are temperature controlled and force ventilated. Paint spray booths should meet local and industry standards. The aircraft assembly area should be adequate and clean. The equipment for gear retraction demonstration and service (whether live aircraft or an instructional aid) should be in a clear area, safe to use, and accessible to a maximum of eight students. The sheet metal area must have a sufficient number of benches, vises, and an adequate air supply with built-in connectors. Facility layout should incorporate doors that are adequate to move aircraft and in-and-out. This facility should constitute a learning environment appropriate for simulation of return to service.

c. **Engine Subjects (CAR 147, Appendix D).** The layout of the facility must provide cleaning and decreasing facility areas that are appropriate and ventilated. A clean area for powerplant and accessory inspection and repair must be provided. There must be a safe engine runup area and an engine test cell or engine runup stand with appropriate test monitoring instrumentation. A propeller service and balancing area should be provided. As in the case of the airframe facility, the powerplant shop facility should constitute a learning environment appropriate for simulation of return to service.

### 13. TECHNICAL DATA LIBRARY REQUIREMENTS.

An AMTS must provide a suitable technical data reference facility or area. The technical data reference area should have appropriate facilities for study and data examination. It should have an area

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that is isolated from high noise levels. Suitable bookshelves, microfiche readers and supplies, and data files should be available. The technical data must be of a type appropriate for the AMTS ratings. As a minimum, the technical data shall include the following:

- a. Civil Aviation Regulations.
- b. Aircraft, engine, propeller, and type certificate data sheets and specifications.
- c. Airworthiness directives.
- d. Supplemental type certificates.
- e. Maintenance manuals.
- f. Advisory circulars.
- g. Other instructional materials, such as textbooks on basic physics, math, hydraulics, powerplants, etc.

### 14. INSTRUCTIONAL AIDS AND AIRCRAFT.

a. The instructional aids required in CAR 147.17 must be appropriate to the scope and depth of the curriculum of the school. The applicant should ensure that the complexity of instructional aids is appropriate to the specific teaching level of the subject item. An inventory of instructional aids is required.

b. CAR 147.17(a)(2) requires a school to have (for instructional purposes) at least one aircraft of a type currently certificated and validated by the CAA. Many schools use surplus military aircraft to show compliance with this rule; however, at least one must be of a type that is eligible for a type certificate which is validated by the CAA. In some situations, an AMTS may choose to use an airworthy aircraft for certain instructional purposes in shop classes. This is permissible as long as the aircraft is on the school premises at the time of instruction. Active aircraft used to comply with CAR 147.17(a)(2)(d) become part of the approved instructional equipment; therefore, they must be available as specified in CAR 147.37 and listed in the instructional aids inventory.

c. An AMTS must comply with requirements for the ratio of instructional aids to students in each shop course. CAR 147.17(2)(c) permits no more than eight students to work on any one unit of equipment at a time. This does not necessarily mean that a school must have each type of instructional aid for at least every eight students enrolled. However, as an example, if a school has an enrollment of 30 students in the engine course of study and has only two turbine engines, the school must clearly demonstrate in the curriculum what project the students who exceed the 16 permitted on the turbine engines at any one time will be doing; that is, projects on piston engines, carburetors, etc. However, the CAA (or the AMTS) may determine that eight students may be too many to safely and competently conduct a certain project; for example, instruction on live aircraft that are used for the demonstration of gear retraction systems.

### 15. SHOP EQUIPMENT REQUIREMENTS.

a. An AMTS is required to have enough shop equipment in place and in satisfactory operating condition to adequately serve the student enrollment and meet shop/project subject requirements.

b. The equipment must be located so that it can be operated by students in a safe and efficient manner. Large, standing equipment must be securely installed. Placement of large shop equipment should provide sufficient aisle space so that students can move about freely. The equipment must be listed.

### 16. SPECIAL TOOLS STANDARDS.

The AMTS must provide an inventory of special tools required to provide instruction. For subjects taught at Level 3, all special tools required to meet "return to service" standards must be in satisfactory working condition, properly calibrated/tested, and of the proper kind for the purpose for which they are intended. CAR 147.19 requires the AMTS to furnish an adequate supply of special tools appropriate to the ratings and curriculum of the AMTS. Special tools may be custom fabricated for the intended purpose and furnished by the AMTS.

### 17. STUDENT HANDTOOL REQUIREMENTS.

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The school may either provide common handtools or require students to furnish their own. In either case, the school must establish a policy on provision of common handtools. The school must provide a list of required handtools to the students. Any tools that the school requires the student to furnish must be listed specifically in the curriculum and that list must be provided to the students.

### **18. MATERIAL REQUIREMENTS.**

The school must provide a list of materials required for instruction. The school must have sufficient materials in stock and properly stored to provide for the approved student enrollment. In order to ensure adequate instruction, the amount and variety of stocks should directly reflect the requirements of the curriculum. For example, sufficient quantities of rivets, hydraulic fluid, gaskets, sheet metal, etc., are needed to complete a course of study.

### **19. INSTRUCTOR REQUIREMENTS AND RESPONSIBILITIES.**

**a. Faculty Requirements.** Individuals listed as instructors, laboratory assistants or teaching assistants must be CAA certificated with a CAA mechanic certificate having ratings appropriate to those subjects taught (other than certain general subjects such as mathematics, physics, drawing, etc.). The suitability of noncertificated instructors to teach certain general courses will be evaluated by the CAA on an individual basis. As an example, a school may propose to use a non-CAA certificated, but experienced, engineering instructor to teach the mathematics and physics requirements of the general curriculum. Other employees, such as stock clerks or parts persons, are not required to be CAA certificated.

**b. Student/Teacher Ratios.** CAR 147.23 requires at least one certificated instructor for every 25 students in each shop or laboratory class. The AMTS may choose to provide a lower student-to-teacher ratio according to the needs of the class or subject. The AMTS must have procedures to maintain the required minimum instructor ratios when regular instructors are on leave.

### **20. FOREIGN SCHOOLS.**

CAR 147 does not make any provisions for CAA certification or surveillance of aviation mechanic schools located outside the ROC. Foreign AMTS applicants are not eligible for CAA certification.

### **21. SATELLITE SCHOOLS.**

An AMTS may not operate as a satellite facility. All AMTS must be CAA certificated as separate facilities.

## **CHAPTER 3. OPERATING RULES**

### **22. MAINTENANCE OF FACILITIES.**

Under CAR 147, a school is required to continuously maintain the same standards under which it was certificated originally. This includes the maintenance of all facilities and equipment that were required for initial certification.

### **23. CHANGE OF LOCATION.**

An AMTS may not make any change in the school's location unless the change is approved by the CAA in advance. The AMTS is required to notify the CAA in writing at least 30 days prior to the date the change would take effect. During the change in location, no disruption may be made to student instruction or normal classroom attendance. Equipment, facilities, and instructors must be at least at the same level as the standards approved for the vacated facilities.

### **24. TIME AND ATTENDANCE.**

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An AMTS must specify in the approved curriculum the number of instructional hours the school intends to offer. An AMTS must ensure that typical time loss items do not affect approved curriculum hours. Student attendance requirements are specified in CAR 147.31(a). Some typical time loss items are as follows:

- a. Instructors sick or on leave. In small schools, this could result in canceled classes or students sent to a study room.
- b. Teachers' strikes.
- c. Weeks scheduled for private study and/or testing outside of the approved curriculum.
- d. Class outings, not related to aviation maintenance, that take time away from instructional hours.
- e. Student achievement days, sports days, and special event days.
- f. Teachers' meetings and grading days.
- g. Student absences beyond those permitted in the CAA approved curriculum.
- h. Classroom or shop time spent on noninstructional activities such as school administrative work and pep rallies, cleaning, painting, preparation of instructional aids, etc.
- i. Any other activity that intrudes on instructional time.

### 25. ENROLLMENT.

An AMTS applicant cannot have more students enrolled than the number stated on the certificate application. As enrollment increases or decreases, an AMTS may choose to change either the number of certificated or noncertificated instructors or the subjects to be taught by each. However, when instructors are changed or if enrollment exceeds the CAA approved figures, the CAA must be notified in advance.

### 26. RECORDS, TRANSCRIPTS, AND GRADUATION CERTIFICATES.

An AMTS must provide the CAA with documents that show records on each student for the following items. (New AMTS applicants must also show the proposed method of meeting CAA records requirements.)

**a. Records.** Records must make clear which tests, quizzes, and practical projects are required, and which ones are optional. Student records should clearly distinguish between successful performance and unsuccessful performance. The record should show how credit was granted for previous experience and/or previous instruction. Progress records or charts do not have to show student grades for practical projects or laboratory work if those grades are available in another record at the school. Student attendance records should show the number of hours of absences. CAR 147.33 requires schools to retain tests for 2 years. This does not refer to each student's personal tests but to the grades received on tests given to the student for each subject. Examples of the forms used for these records should be in a document such as the curriculum.

**b. Transcripts.** Grade transcripts must be authenticated by an official of the school. Transcripts must contain a complete record of the courses, grades, and dates of completion and must be made available to the student regardless of whether or not the student graduates.

**c. Graduation Certificates or Certificates of Completion.** These must be authenticated by an officer of the school and can be issued only if all the curriculum requirements have been completed (either by taking or passing the specified courses or by being properly credited with them). All students meeting the AMTS graduation or completion requirements must be issued the appropriate certificate. The certificates should contain the name of the AMTS, its certificate number, the approved course name, and date of graduation.

### 27. MAINTENANCE OF INSTRUCTOR REQUIREMENTS.

After an AMTS is certificated or has added or dropped a rating, the AMTS must continue to provide an appropriate number of instructors with the ratings and certificates required by the CAA. The AMTS must continue to provide at least one CAA approved instructor for each 25 students in each shop or laboratory class.

### 28. MAINTENANCE OF INSTRUCTIONAL AIDS.

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An AMTS must continue to maintain all instructional aids and equipment in good working order and in a condition for safe operation. Broken or deteriorated instructional aids must be repaired or replaced. The school must continue to provide sufficient instructional aids so that there will not be more than eight students per instructional aid unit at any one time.

### **29. MAINTENANCE OF TECHNICAL DATA REFERENCE MATERIALS.**

An AMTS should provide a system that identifies the person responsible for updating the technical data/reference materials. The procedure must clearly show the methods for maintaining and upgrading the data.

### **30. MAINTENANCE OF SHOP EQUIPMENT AND SPECIAL TOOLS.**

Shop equipment should be maintained in good working order and be in a condition for safe operation. A system should be in place for routine preventive maintenance and component replacement on all shop equipment. A system should be in place to maintain special tools in satisfactory working condition.

### **31. MAINTENANCE OF TOOL SUPPLY.**

The school must continue to provide all tools and special tools specified in the tool list. During school operation, tools may not be removed from the AMTS inventory without being replaced.

### **32. MAINTENANCE OF INSTRUCTIONAL MATERIALS.**

The AMTS must continue to provide required materials specified in the material list.

### **33. MAINTENANCE OF QUALITY OF INSTRUCTION.**

An AMTS must continue to provide instruction of the same quality as it demonstrated to the CAA during and immediately after certification. The procedures used by the CAA to measure AMTS instruction quality is a measure of the performance of AMTS graduates from each school who are taking the Airframe and Engine Mechanic Tests.

### **34. AVAILABILITY OF TYPE CERTIFICATED AIRCRAFT.**

CAR 147.17(a)(2) requires an AMTS to continue to provide a type certificated aircraft for student instruction. Specific requirements are discussed in Chapter 2, paragraph 14b.

## **CHAPTER 4. CERTIFICATION PROCEDURES**

### **35. GENERAL.**

The AMTS certification process is an interaction between the AMTS applicant and the CAA. The certification process extends from the initial inquiry by the school applicant to the final issuance of the CAA certificate. This process ensures that the school's curricula, programs, policies, facilities, and methods of compliance with the regulations are thoroughly reviewed, evaluated, and validated. The CAA certification process consists of five separate phases listed below:

- a. Preapplication Phase.**
- b. Formal Application Phase.**
- c. Document Compliance Phase.**
- d. Demonstration/Inspection Phase.**
- e. Certification Phase.**



**NOTE:** These phases may often overlap and can proceed concurrently. As an example, the document compliance phase may begin as soon as documents are received, before or during the formal application phase.

### 36. PREAPPLICATION PHASE.

**a. Initial Inquiry.** An applicant seeking to develop an AMTS must contact the CAA and advise the office of the intent to pursue CAR 147 school certification. The CAA will provide the school applicant with a copy of the Preapplication Statement of Intent (PASI), and will explain to the applicant how to complete it. The CAA will also advise the applicant which regulations must be met and where copies of the regulations can be obtained. The applicant must review the requirements and return the completed PASI to the CAA before a Preapplication meeting can be scheduled.

**b. PASI.** An applicant should submit copies of the PASI only after reviewing the appropriate regulations and advisory material. Prior to PASI submission, the applicant should consider the personnel, facility, equipment, and regulatory requirements for certification and operation.

**c. Preapplication Meeting.** Following receipt of the completed PASI, the CAA will contact the AMTS applicant and arrange a Preapplication meeting. During this meeting, the applicant should ask any questions that he or she may have concerning CAA certification. The following events take place during the Preapplication meeting:

(1) CAA personnel brief the applicant on the regulatory requirements and policies regarding certification and operation of an AMTS.

(2) The applicant informs the CAA as to which of the three types of ratings are sought: airframe, engine, or combined airframe and engine.

**NOTE:** Due to the complexity and costs involved in certification, many AMTS applicants initially choose to seek certification for only one rating to reduce certification time and get classes under way.

(3) The applicant is given copies of CAA Aviation Maintenance Technician School Certificate and Ratings Application, to complete.

(4) The applicant is given a thorough briefing on required attachments to the formal application. An applicant will be briefed on how to comply with these requirements, since the quality of these documents is a positive determining factor in CAA certification review. Note that these attachments can be presented to the CAA in writing either before or when formal application is made. The attachment documents should include:

(i) A document compliance statement listing each applicable CAR 147 section. The statement should provide either a brief narrative or, preferably, a specific reference to a manual, curriculum, or other document that describes the manner of compliance with each part of that regulation.

(ii) A system for recording student attendance and the student attendance policy.

(iii) A system providing procedures for maintenance of precision/special tools.

(iv) A letter requesting that the application be processed and indicating when the facilities and equipment will be ready for a formal inspection by the CAA.

(v) Two completed copies of the CAA Aviation Maintenance School Certificate and Ratings Application.

(vi) A detailed description of the proposed curriculum. Since the curriculum must be approved by the CAA before the school can be certificated, an applicant can save time and money if the proposed curriculum is submitted before the formal application. Typically, a curriculum may take several CAA/AMTS review sessions prior to approval. See curriculum requirements in Chapter 2, paragraph 10.

(vii) A written description of the facilities to be used for instruction. The applicant should also provide detailed drawings, with dimensions, of the classrooms and the technical library, laboratory/shop facilities. Drawings should show the relative location of each school facility to each other facility. If classroom or laboratory/shops are located at significant distances from each other, the applicant should describe how and if travel time will affect required class attendance time.

(viii) A proposed inventory of the following items must be submitted:

(A) Instructional aids that include the numbers and types of mockups, aircraft, aircraft components, charts, etc.

(B) All shop equipment.

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(C) All special tools.

(D) Required student handtools (the applicant must list in detail which handtools will be provided by the school and which tools the student will be required to own).

(E) Shop and laboratory instructional materials (rivets, sheet metal, etc.).

(ix) A list of proposed instructors showing all required certificate numbers(s), ratings, and the subjects to be taught by each instructor. Every subject in the proposed curriculum must be accounted for on the instructor listing. At least one CAA approved instructor is required for every 25 students in each shop or laboratory class, and this must be shown in the list of instructors.

(x) A statement indicating the maximum number of students to be taught for each rating during each enrollment period. This information must be shown on the application form as well.

(xi) A written description of the contents and location of the proposed technical data reference area, including the appropriate and current technical data necessary for the ratings sought. The description should contain procedures on how, when, and by whom the technical data will be updated. As a minimum, the technical data must include the following:

(A) Civil Aviation Regulations.

(B) Type Certificate Data Sheets.

(C) Airworthiness Directives.

(D) Supplemental Type Certificates.

(E) Maintenance Manuals.

(F) CAA Advisory Circulars.

(G) Other instructional materials on subjects required by CAR 147, such as textbooks on basic physics, mathematics, hydraulics, aircraft maintenance, etc.

(xii) A written description of the method the school will use to grant credit to students for previous aviation maintenance technician experience. CAR 147.31(c)(3) requires that only documentary evidence and testing may be used to grant credit for experience. Previous experience must be aviation maintenance experience and must be comparable to the required curriculum subjects.

(xiii) A written description of the method the school will use to grant credit to students for previous aviation maintenance technician training. CAR 147.31(c)(1) permits several methods to be used for granting credit for previous training. School transcripts, catalogues, and other course documentation can be used to grant credit. An AMTS applicant cannot teach students before holding AMTS certification and then grant credit for that training after CAA certification.

(xiv) If not already specifically included in the curriculum, a written description of the method the school will use to record and maintain student time and attendance and course grades. The system must include a method of determining final course grades which are a combination of classroom, laboratory, and practical project grades. The system must show the number of hours of absence that will be permitted and the makeup provisions for the classes that are missed. All makeup time must be in the classes and subjects that were missed. All required practical projects must be completed to at least the minimum grading standards.

(xv) System that indicates how testing and grading security will be maintained.

(xvi) Listing of any texts that will be used in the approved curriculum. These must be appropriate to the instructional material, curriculum, and the CAA ratings sought.

### 37. FORMAL APPLICATION PHASE.

**a. Document Review.** After the required PASI and preapplication information have been submitted, the CAA will review the documents. When the CAA has determined that all the documents are complete and acceptable, the school will be contacted and a formal application meeting will be arranged.

**b. The Formal Meeting.** In the formal application meeting, the AMTS applicant's key decisionmaking personnel should be available to meet with the CAA and discuss the entire application package. Any open questions or discrepancies should be resolved at this time. Based on the document review and the results of these meetings, the CAA will accept or reject the application at this time. Results of this meeting will be documented in writing. In the case of a rejected applicant, the application and attachments will be returned to the applicant with the reasons stated for rejection.

### 38. DOCUMENT COMPLIANCE PHASE.

This phase generally overlaps the preapplication phase and extends through the formal application phase. It is recommended that this phase be initiated as early as possible in the certification process.

**a. Evaluation of Documentation.** All documents submitted during the preapplication phase will be carefully reviewed. The CAA can be expected to place particular emphasis on the curriculum content and the methods within the curriculum that are used to comply with the regulations. The CAA will maintain contact with the applicant during this phase. All deficiencies found in the curriculum or in any other preapplication documents will be returned to the applicant with a letter outlining the deficient areas. The CAA generally offers suggestions on modifying the product but will not write the applicant's documents. A future meeting between the CAA and the applicant will be scheduled to discuss each deficiency in detail. If the documents, as a whole, are not of sufficient quality to complete the certification, the entire certification process will be terminated by the CAA.

**b. Termination.** In the case of termination of the certification process, the applicant must submit a new PASI in order to begin the certification process again.

### 39. DEMONSTRATION AND INSPECTION PHASE.

**a. Inspection Schedule.** Following a successful formal application phase, the CAA will arrange with the applicant to inspect the facility. At this point, the AMTS facility will be expected to be complete with all the shop equipment, instructional aids, instructional aircraft, special tools, and other required laboratory or shop installations in place. Before scheduling an inspection, the applicant should be certain that the facility is ready to meet the standards required to begin instruction.

**b. Emphasis.** During the inspection, the CAA inspectors will carefully examine the facilities and equipment in order to ensure that the procedures, programs, facilities, and equipment meet CAA requirements and are safe and sufficient for the training program in the shop to be effective.

**c. Demonstration Criteria.** In particular, the AMTS must demonstrate compliance with the following regulations:

- (1) Facilities must meet the requirements of CAR 147.13 and 147.15.
- (2) Instructional equipment must meet the requirements of CAR 147.17.
- (3) All special tools, handtools, shop equipment, and instructional materials must meet the requirements of CAR 147.19.

**d. Demonstration Deficiencies.** When deficiencies in the demonstration arise, the CAA will provide a written list of the discrepancies to the applicant. Depending on the magnitude of the deficiencies, the CAA may schedule a meeting to discuss in detail the appropriate corrective actions that must be taken. At or immediately following the meeting, the applicant must provide the CAA with a list of all corrective actions taken. No AMTS will be CAA certificated with any outstanding discrepancies. All must be corrected before certification may be granted. If the discrepancies cannot be resolved and/or the applicant does not demonstrate compliance with the regulations, the CAA will terminate the certification process and send the applicant a letter of rejection and a list of the discrepancies still outstanding.

**e. Termination.** If the CAA terminates the application, then the applicant must correct the discrepancies and submit a new PASI to reinitiate the certification process.

### 40. CERTIFICATION PHASE.

**a. Successful Application.** When all the regulatory requirements have been met, the school will be issued a CAA certificate. The form will contain the name of the school and its ratings. At this time, the school's curriculum will be returned by the CAA, signed, and dated on all the effective pages and on any revision pages.

**b. Surveillance.** The CAA will inspect and observe the school frequently during the first 90 days of operation to determine compliance with the applicable CAR. During this initial period, the CAA may determine that it is necessary to schedule additional inspections in order to determine compliance. The CAA may also direct certain changes in the methods or techniques of school operation.

## APPENDIX 1. SAMPLE CURRICULUM OUTLINES

Chapter 2 states that curriculum development may evolve from several developmental stages. An example of working through a curriculum is found in Samples 1, 2, and 3. The first stage in curriculum development is the evaluation of performance goals and important issues that the applicant should grasp.

### SAMPLE 1, STAGE 1:

(SCHOOL NAME)

#### CAR 147 APPENDIX B, SUBJECT F GROUND OPERATION AND SERVICING

##### Item 21. Identify and Select Fuels.

Identify Aircraft Fuels

Student Performance Goal

\* **Given:** Aircraft operator's manual, a list of colors and octane rating ranges and a fuel system of an airplane.

\* **Performance:** The student will obtain fuel samples from the fuel system of an airplane and verify that the fuel at least equals the minimum required octane rating. The student will associate each color with the correct octane range, describe how volatility is related to vapor lock, and discuss the advantages and limitations of kerosene as a turbine fuel.

\* **Standard:** Matching of color to octane rating will be 100 percent correct.

##### KEY POINT:

Significance of octane/performance number in identification of fuel.

##### FEEDBACK:

- \* What is iso-octane?
- \* What is normal heptane?
- \* How do these produce the octane number?
- \* Why are performance numbers used when a fuel exceeds 100 octane rating?
- \* What is the significance of the second number in fuel rating that is, 100/130?
- \* What happens if the octane rating is
  - a. Too low?
  - b. Too high?
- \* Which is more critical?
- \* How is the minimum octane rating of fuel for each engine installation determined?

##### KEY POINT:

Color identifying octane performance number.

##### FEEDBACK:

- \* What colors are used in identification of fuels?
- \* Do they adversely affect combustion?
- \* How do colors aid in detecting leaks?

### SAMPLE 2, Stage 2, Continuing Curriculum Development

The following sample shows an example of the second stage in developing a curriculum. It addresses the same subject area as stage 1 but it also defines the amount of instruction time, the specific CAR section addressed, teaching level, and the performance standard the student is expected to achieve. However, testing and grading criteria are not yet developed.

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(SCHOOL NAME)

**CAR 147, APPENDIX B, SUBJECT F**

**Ground Operation and Servicing**

**UNIT TITLE: IDENTIFY AND SELECT FUELS. Subject Item 21**

**TEACHING LEVEL (2)**

Classroom teaching time: 2.5 hours

Laboratory or shop time: 2.5 hours

Instructional time: 5 hours

### **IDENTIFY AIRCRAFT FUELS**

**Given:** Aircraft operator's manual, a list of colors and octane rating ranges and fuel samples or illustrations.

**Student Performance:** The student will obtain fuel samples and/or aircraft specifications. The student will associate each color with the correct octane range according to aircraft specifications, describe volatility is related to vapor lock, discuss how octane ratings affect engine performance.

**Standard:** Matching of color to octane rating will be 100 percent correct.

### **SAMPLE 3, Stage 3, Complete Curriculum Element**

The following sample on the subject of aircraft cleaning and corrosion control contains all the elements required to teach, test and conform to the rule. It is not intended to be an expansive text. It is a short outline of elements expected in the final curriculum product. Sample 3(A) describes the typical contents of a single subject element and Samples 3(B) through 3(E) provide information on practical projects, tests, and grading criteria.

(SCHOOL NAME)

**CAR 147 APPENDIX B, SUBJECT G**

**SUBJECT: CLEANING AND CORROSION CONTROL**

**ITEM 23. PERFORM AIRCRAFT CLEANING AND CORROSION CONTROL**

**TEACHING LEVEL (3)**

Classroom time: 3 hours

Laboratory or shop time: 2 hours

Total time: 5 hours

**(Sample 3(A)) Curriculum Subject Guide**

**(Sample 3(B)) Practical Project Guide**

**(Sample 3(C)) Theory Test**

**(Sample 3(D)) Practical Tests**

**(Sample 3(E)) Practical Project Grading Criteria**

**SAMPLE 3(A), Curriculum Subject Guide**

In a typical curriculum, the elements included in this subject guide may be separated or combined in many different combinations. The following teaching items should be present in some form in an CAA approved AMTS curriculum.

- (1) Introduction and Subject Element Objectives (Purpose)
- (2) Instructors' Guide (Teaching Outline)
- (3) Technical information and equipment - References (Manuals, Tools, Materials)
- (4) Workbooks or other guidance for classroom, laboratory and shop (Procedures)

The sample on the following page, 3B (Practical Project Guide), demonstrates how teaching items 1 through 4 may be incorporated into Practical Project Requirements.

**NOTE:** These teaching items may appear in any format, explicit or nonexplicit, and should be present in all subject elements, both theory and practical projects. For example, the instructors' guide/teaching outline may be combined with procedures. In some cases, certain items' outlines may be combined with procedures. Many other concepts are also in common usage.

**SAMPLE 3(B) Practical Project Guide**

The following is a sample practical project guide (Guide For General Curriculum Subject Item 23, Perform Aircraft Cleaning and Corrosion Control). When preparing a practical project guide, instructions should be accompanied by photographs, diagrams, or technical illustrations showing methods and techniques expected of the student, as applicable.

**(SCHOOL NAME)**

**PRACTICAL PROJECT GUIDE FOR GENERAL SUBJECT 23**

**CAR 147, APPENDIX B, SUBJECT G**

**ITEM 23 PERFORM AIRCRAFT CLEANING AND CORROSION CONTROL**

**PURPOSE:**

To acquaint the student with emulsion-type cleaners and processes associated with the proper cleaning of exterior aircraft components.

**REFERENCES:**

- (1) Appropriate CAA Advisory Circulars.
- (2) Product information on cleaners, lubricants, waxes, aircraft or component manufacturer's service information.
- (3) Aircraft or component manufacturer's service information.

**EQUIPMENT AND TOOLS NEEDED:**

- (1) Water supply and bucket.
- (2) Brush, sponge, and soft, clean rags.

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- (3) Component to be cleaned.

### **SUPPLIES AND MATERIALS NEEDED:**

- (1) Emulsion-type cleaner.
- (2) Water displacing lubricant and corrosion inhibitor.
- (3) Paste or liquid wax suitable for aircraft exterior.

### **PROCEDURE:**

- A. Assemble all materials.
- B. Chock main wheels.
- C. Prepare aircraft: Close aircraft windows and vent doors, cover static port and pilot tube.
- D. Install all maintenance struts or locking devices.
- E. Remove all electrical power from aircraft.
- F. Read the aircraft or component manufacturer's cleaning instructions.
- G. Read the manufacturer's cleaning instructions.
- H. Mix cleaner with the appropriate amount of water.
- I. Prerinse aircraft with water to eliminate dirt. (See Figure 1)

\_\_\_\_\_

### **FIGURE 1**

\_\_\_\_\_

**NOTE:** Certain areas may require light scrubbing with a soft bristle brush.

- J. Systematically apply premixed cleaner and water to small areas working from the top down using rags wet with solution. (See Figure 2)

\_\_\_\_\_

### **FIGURE 2**

\_\_\_\_\_

**K.** Rinse component and lubricate and/or spray corrosion inhibitor on all areas according to aircraft manufacturer's instructions. Wax as appropriate. (See Figure 3)

---

**FIGURE 3**

---

**SAMPLE 3(C) Sample Theory Test**

**SCHOOL NAME TEST**

**AIRCRAFT CLEANING AND CORROSION CONTROL THEORY TEST**

**CAR 147, APPENDIX B, SUBJECT G**

**ITEM 23: DETERMINING STUDENTS' KNOWLEDGE OF AIRCRAFT CLEANING AND CORROSION CONTROL**

**THEORY TEST**

**A.** Complete these factual statements related to corrosion:

**1.** Electrochemical process that can reduce aluminum alloys to powder:

---

**2.** Sheet metal construction formed by laying one piece partly over another piece at the edge:

---



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3. Cleaner that mixes with water or solvent in an emulsion: \_\_\_\_\_

**B.** Based on information you have learned, describe the type of aircraft structural corrosion shown in the following illustrations:

**Corrosion type:**

\_\_\_\_\_

1. \_\_\_\_\_ (ILLUSTRATION)

\_\_\_\_\_

**Corrosion type:**

\_\_\_\_\_

2. \_\_\_\_\_ ILLUSTRATION

\_\_\_\_\_

**NOTE:** The sample theory test outlined here is very limited in scope and is intended only to serve as an example. An actual theory test would necessarily have to be more comprehensive in order to address the key points related to this subject.

### **SAMPLE 3(D) Sample Practical Test**

**SCHOOL NAME**

**AMTS PRACTICAL TEST**

**CAR 147, APPENDIX B, SUBJECT G**

**ITEM 23: PERFORM AIRCRAFT CLEANING AND CORROSION CONTROL**

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## **PRACTICAL TEST 1: CORROSION CONTROL**

Moisture held in contact with a metal surface by an accumulation of dirt or grease is a significant cause of corrosion. Therefore, cleanliness of the exterior surface of the aircraft is one of the best methods to control corrosion. If the surface can be kept reasonably dry and clean, corrosion has little chance of getting started. The essence of corrosion control is prevention rather than removal.

The student will be provided with an aircraft component showing evidence of corrosion.

The practical test for this subject consists of the following steps:

- A.** Identify part to be inspected.
- B.** Identify type of corrosion.
- C.** Use of reference materials and technical publications.
- D.** Discussion of the corrosion control process to be used for this specific type of corrosion.
- E.** List of cleaning and corrosion preventive chemical to be used.
- F.** Mechanical corrosion removal correctly performed.
- G.** Correct application of corrosion preventive.
- H.** Correct application of primer coating, etc.

## **SAMPLE 3(E), Sample Practical Project Grading Criteria**

There are no established CAA criteria for the grading of completed practical projects. No matter which method an AMTS applicant uses, whether those shown here or a method the school may choose, the grading should be objective and repeatable. The grading method should reflect both the required teaching level of the subject and the subject proficiency requirements (for example, a student may be required to construct, adjust, or overhaul, etc.). An AMTS should avoid assigning points for student "good grooming" and "most improved" student, as those do not directly relate to the accomplishment of a practical project and are subjective in nature. Although many different methodologies are employed for grading practical projects, AMTS practical project grading systems approved by the CAA may be broadly grouped into three general methods.

**Method A:** In this method, practical projects are graded by establishing grading standards for job accomplishment or completeness, work performance or workmanship (airworthiness), verbal knowledge, and development of professional AMT skills. Typically, Method A assigns more weight to some skill elements in a project than others. It also may assign numerical grades to each project element. See Method A grading example.

**Method B.** This method grades projects on a more specific criteria, such as competency in general skills and degree of skill accomplishment for specific elements and critical aspects of the task. For example, grade points, such as Superior, Average, etc., may be assigned for the competency of the student's work. Additional points may be assigned for specific elements of the project, such as the use of correct procedures, proper reference materials, overall airworthiness, completion to a return-to-service condition, or on-time completion. Further, certain project tasks or portions of a practical project may be considered "must pass" items, requiring 100 percent conformity with CAA airworthiness standards. See Method B example.

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**Method C.** This type of grading procedure is more suitable for practical projects in which a component is fabricated, for example, subjects such as welding or sheet metal. For these projects, grading criteria can be clearly defined by measurement of the completed project, such as sheet metal patch size, rivet size and pitch, weld quality, and fillet configuration. This method is less suitable and less frequently used for practical projects involving the development of manipulative skills in projects such as gear retraction mechanism adjustments, engine troubleshooting, etc. See Method C grading example.

### METHOD A

The following section presents an example of the practical project grading criteria as shown in Method A. In this case, the project to be graded is from Sample 3(D), Practical Test 1, Corrosion Control.

SUBJECT ELEMENTS POINTS	GRADE
A. Identification of Part to be Inspected	10
B. Identification of Type of Corrosion	10
C. Selection of Correct Reference Data	5
D. Verbal Knowledge of Corrosion Control Process	5
E. Performance of Corrosion Removal	50
F. Performance of Preventive Measures	5
G. Performance of Primer Application	5
H. Job Completeness (Includes Cleanup)	5
I. Workmanship (Airworthiness)	5
-----	
<b>TOTAL POINTS POSSIBLE -----</b>	<b>100</b>
<b>Minimum Passing Grade points</b>	<b>70</b>

**NOTE:** The selection of numerical values for each subject element is left to the discretion of the school. In this case, the actual performance of the corrosion removal process is considered the most important element, and failing this section (that is, no points) prevents a student from passing this project. In most cases, an AMTS will choose to assign more weight to areas considered critical.

### METHOD B

This section presents an example of the practical project grading criteria as shown in Method B. The project to be graded is the same one shown in Method A, Practical Test 1, Corrosion Control. In Method B, the grading criteria are more specific than in other methods shown. In this method, student performance is graded on a scale from failure to superior. Although the example here shows a limited student performance range, some schools may choose to develop more elaborate criteria.

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(1) Consider the following student performance grade scale:

**F** = Failure of element by student

= **0 points**

**P** = Passing to standard by student

= **1 point**

**S** = Superior performance by student

= **2 points**

(2) Within each practical project, a value is assigned to each project step or element. In this example, the value for any specific element ranges from 5 to 20, in increments of 5.

(3) In this example, certain elements of the project are "must pass" items. All "must pass" project elements are to be completed to the approved standard in order to successfully finish the practical project.

**Note that not all projects within a curriculum may use "must pass" items; however, this practice is an acceptable AMTS grading system.**

(4) In this example, it is possible to successfully complete this complete practical project by failing an element of the project. However, the other elements would have to have superior performance and all the "must pass" items would have to be successfully completed.

(5) This method of project grading is accomplished as follows: The grade that a student achieves on the performance scale for each subject element is multiplied by the value of the subject element to determine the points a student can achieve on each subject element.

**As an example, on one subject element a student passes to the grading standard and achieves a grade of P, which equals 1 point. If the subject element has a value of 5 points, the grade points on this element are:  $1 \times 5 = 5$  grade points. If the student achieves a superior performance, or S, which equals 2 points, the grade points on this element would be:  $2 \times 5 = 10$  grade points.**

### METHOD B - (continued)

In this example, the project to be graded by Method B is the same one shown in Method A, Practical Test 1, Corrosion Control.

**NOTE: Project elements with an asterisk (\*) are "must pass" items. Project element values are shown in parentheses ( ).**

**Performance scale values are Fail = 0, Pass = 1, Superior = 2.**

### SUBJECT ELEMENTS GRADE POINTS

### PERFORMANCE SCALE

A.\* Identification of Part  
Pass

B.\* Identification of Corrosion  
Pass

C. Selection of References (5)  
5

1

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<b>D.</b>	Verbal Knowledge	<b>(10)</b>	<b>1</b>
<b>10</b>			
<b>E.*</b>	Removal of Corrosion		
<b>Pass</b>			
<b>F.</b>	Performance of Preventive Measures	<b>(20)</b>	<b>1</b>
<b>20</b>			
<b>G.</b>	Primer Application	<b>(20)</b>	<b>1</b>
<b>20</b>			
<b>H.</b>	Finish Application	<b>(5)</b>	<b>1</b>
<b>5</b>			
<b>I.</b>	Job Completeness	<b>(10)</b>	<b>1</b>
<b>10</b>			
<b>J.</b>	Workmanship	<b>(10)</b>	<b>1</b>
<b>10</b>			
<b>TOTAL POINTS</b> -----			<b>80</b>

**Minimum Passing Grade:**  
**80 points**

The maximum number of points possible would be 160, indicating fully superior performance. In the example shown, the student has received a passing grade for each subject element, resulting in a grade of 80.

### METHOD C

The following example shows how an AMTS might grade a practical project using Method C. As stated before, this system is more suitable for practical projects where a student constructs a piece of hardware, that is, sheet metal, wood, fabric, or welding.

#### Method C, Practical Test 1: Repair Aircraft Structures Built From Sheet Metal

##### INSTRUCTION 1 - STUDENT WILL ACCOMPLISH A SHEET METAL REPAIR BY PATCHING A DAMAGED WING RIB SECTION.

In this case, a drawing or blueprint of the patch should be supplied to the student. The drawing will show the size, shape, thickness, etc., of the patch to be made. The student will be expected to use correctly the rivet size, rivet pitch, edge distance, and other criteria shown on the drawing. If the grading standard at the AMTS is, for example, 70 percent, at least 70 percent of the rivets, patch sizes, shapes, and other criteria must meet the drawing specifications. In addition, points may be subtracted for general workmanship, scribe marks, scratches, riveting damage, and other workmanship that may detract from airworthiness. In many cases, the criteria may be simply a pass/fail type based on the drawing specifications.

##### INSTRUCTION 2 - STUDENT WILL ACCOMPLISH THE FOLLOWING STEPS TO THE APPROVED STANDARD USING THE SUPPLIED DRAWING.

**A.** Determine size and shape of patch.

**B.** Plan and layout rivet patterns.

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- C. Select proper number and types of rivets.
- D. Use proper riveting techniques on repairs.
- E. All work will be performed to an airworthy standard.
- F. Unless otherwise stated all work shall conform to CAA Standards.

As can be seen from the information discussed in these methods, AMTS may use several different types of grading systems to grade practical projects. In fact, an AMTS may use several different grading methods in the curriculum, depending on the types of practical projects to be evaluated. However, no matter which method or methods a school elects to use, the grading methods must be clearly described in the curriculum.

### APPENDIX 2. MAINTENANCE OF THE GENERAL CURRICULUM

AMTS are encouraged to keep the subjects within the curriculum areas shown in CAR 147, Appendices B, C, and D. When subjects are taught in the areas shown in the Appendices, it is not difficult for the CAA to determine whether all the required subjects for a particular rating are taught. This practice is recommended to ensure that a school can also determine clearly that all required subjects are taught, particularly when a school offers more than one rating. For example, consider the following sample curriculum development cases:

AMTS XYZ and AMTS ABC are two schools that hold the same rating, in this case, airframe.

**CASE 1:** AMTS XYZ is an approved school with an airframe rating and teaches all required general subjects within the General Curriculum.

General Curriculum Subjects	- G1,...G33
+ Airframe Curriculum Subjects	- A1,... A55
-----	
<b>Student Graduates Eligible for Airframe Certificate</b>	

**CASE 2:** AMTS ABC has an airframe rating only and teaches all required general subjects mixed with subjects from the airframe curriculum.

General Curriculum Subjects	- G1, ... G30
+ Airframe Curriculum Subjects	- A1, ... A55 + G31, G32, G33
-----	
<b>Student Graduates Eligible for Airframe Certificate</b>	

### APPENDIX 2. MAINTENANCE OF THE GENERAL CURRICULUM (continued)

Both Schools now elect to add an engine rating:

**CASE 3:** AMTS XYZ

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	Eligible			
	-----	Airframe	=	Graduate
General	-----			
Eligible		-----	Engine	= Graduate

### CASE 4: AMTS ABC

General/Airframe	=	Eligible	
		Graduate	
		Engine	= Not Eligible

A student at school ABC taking the engine curriculum only would not be eligible for graduation from the engine curriculum since some of the required general subjects are in the airframe curriculum and would be missed if the student took only the engine curriculum. In order to properly graduate students in the engine curriculum, AMTS ABC would be required to either teach a parallel set of the missed general subjects in the engine curriculum or teach all general subjects only in the General Curriculum. From an administrative standpoint, the most desirable method is to teach all general subjects in the General Curriculum.

## APPENDIX 3. ADDITIONAL COURSE MATERIAL RECOMMENDATIONS

The introduction of new aerospace technologies and maintenance requirements have changed the KSAs required of AMTS. A number of AMTS have developed course materials to instruct students in emerging disciplines. Although the current regulations do not require it, a significant number of AMT schools are establishing these courses to satisfy industry demands. Following are some examples of courses offered in emerging areas:

### 1. Composite Material Repair.

A composite repair course can be as simple as teaching fiberglass repair using prepackaged student instruction kits available from various sources, or as complex as a full scale repair facility. Full scale composite repair facilities teach and repair many types of composite materials, such as fiberglass, Kevlar, boron, carbon materials, etc. Instructional aids and shop equipment can include clean rooms, down draft worktables, positively vented rooms, composite autoclaves, refrigerated material storage, and various aircraft composite structures for instruction. Some AMTS offering composite repair courses combine a nondestructive inspection course along with the basic course.

### 2. Nondestructive Inspection (NDI).

An NDI course that teaches beyond the requirements of CAR 147 (Magnetic Particle, etc.), generally includes training in radiography (X-ray), ultrasound, eddy current inspection and borescope techniques. Information on and equipment for NDI course development are widely available from commercial sources.

**3. Solid State Electronics/Avionics/Built-In Test Equipment.**

Many AMTS currently offer extended training or stand-alone course work leading to an electronics subspecialty in addition to a CAA airframe and engine mechanic certificate. Although the CAA does not grant certification in the subspecialties, many potential aviation employers are requiring AMTs to have this enhanced training. These courses may be incorporated into existing required AMTS courses, such as Basic Electricity and Basic Physics. Course material, curricula, and laboratory/shop equipment are readily available from commercial sources.



## 航空人員地面機械員訓練機構檢定給證檢查表 AMTS CERTIFICATION CHECKLIST

表格編號 FORM No. :AMTS-001

頁次 Page: 1/1

訓練機構名稱 School Name	位 置 Location	日期 Date		
檢查項目 CHECK ITEMS	滿 意 SAT	不滿意 UNSAT	完成日期 Date Comp	
初次詢問日期 Date of initial inquiry				
申請前會議日期 Date of Preapplication meeting				
(第1冊, 第2節) (vol 1, Section2)				
正式申請階段 Formal Application Phase (第1冊, 第2節) (vol 1, Section 2)				
文件符合階段 Document Compliance Phase (第1冊, 第2,4,6節) (vol 1, Sections 2, 4, 6)				
驗證階段 Demonstration Phase (第1冊, 第2,4,6節) (vol 1, Sections 2, 4 and 6)				
給證階段 Certification Phase (第1冊, 第2,4,6節) (vol 1, Section 2, 4, 6)				
檢定檔案 Certification File (第1冊, 第2節)(vol 1, Section 2)				
未來檢查 Future Surveillance				
備註： Remarks:				

組長：

督導：

主任檢查員：

<b>航空人員地面機械員訓練機構工作進度表</b> <b>REGULATION AMTS SCHEDULE OF EVENTS</b>				
航空人員地面機械員訓練機構名稱 OFFICAL NAME OF AMTS		航空人員地面機械員訓練機構地址 LOCATION ADDRESS OF APPLICANT		
航空人員地面機械員訓練機構許可證號 CERTIFICATION NO.		通信地址(如異於上述地址) MAILING ADDRESS		
預定送審日期 Scheduled date of submission	正式申請階段 Formal Application Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/Accepted
	1. 正式申請函 Formal Application Letter			
	2. 工作進度表 Schedule of Events			
	3. 初步符合陳述函 Initial Compliance of Statement			
	4. 課程 Curriculum			
	5. 教師及資格表 Instructors & Qualifications List			
	6. 招生陳述 Max. Number of Students			
	7. 設施之書面描述 Written Description of Content			
	8. 設備、材料及工具清單 Instructional Materials (Textbook、Hydraulics、A/C Maintance、etc)			
	9. 技術資料 Technical data			
備註 Remarks:				

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預定送審日期 Scheduled date of submission	文件符合階段 DOCUMENT COMPLIANCE Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/Accepte d
	<p>1. 審查課程 Review Curriculum</p> <p>a. 時數 Hours</p> <p>b. 課程符合地面機械員訓練機構設置 實施要點, 附件一, 二, 三 及 四 Curriculum per CAR 147, App.1, 2, 3 and 4</p> <p>c. 教師資格匹配科目 Instructors qualifications match subjects</p> <p>d. 等級 2 及 3 課程包含實作 Level 2 and 3 subjects involve practical</p> <p>e. 50 %課程必須為實驗室或工場課 50 % of curriculum must be lab or shop</p> <p>f. 每一課程測驗時程表 Schedule of test for each subject</p> <p>g. 課程敘述民用航空局最低要求 Curriculum states minimum CAA requirements</p> <p>h. 學科及術科評分標準 Grading for academic and practical subjects</p> <p>i. 補課程序 Makeup procedure</p> <p>j. 先前經驗之學分給予程序 Procedures for previous experienced</p> <p>k. 畢業最低標準及評定 Testing and Grading</p> <p>l. 記錄及管制到課程序 System for Recording Student Attendance</p> <p>m. 維護、保存及分發學生記錄及成績程 序 Maintain and Record System</p> <p>n. 更新技術資料庫及校準精密儀器程序 Procedures for Maintenance Precision /Special Tools</p>			

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	2. 審查教師資格 Review instructor qualifications a. 證書仍有效嗎？ (Certificates valid?) b. 有民用航空局檢定證及適當類科 (CAA certificate with appropriate ratings) c. 未檢定合格教師教數學、物理、圖學			
預定送審日期 Scheduled date of submission	文件符合階段 DOCUMENT COMPLIANCE Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/Accepted
	(Noncertificated instructors for math, physics, drawings) d. 學生 / 教師 比 25:1 (Student/instructor ratio. 25:1) e. 教師績效 (Instructor performance) f. 教師、檢定證號碼、類科、教授科目表 (List of instructors, certificates, ratings, subjects taught)			
	3. 最後符合陳述 Final Compliance Statement			
	4. 相關程序手冊 Procedure Manual			
備註 Remarks:				

# AIRWORTHINESS INSPECTOR'S HANDBOOK

預定送審日期 Scheduled date of submission	驗證及檢查階段 Demonstration and Inspection Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/Accepte d
	1. 設施 (第1冊, 第5,6節) Facilities (vol 1, Section 5 and 6) a. 教室佈置符合圖 (Classroom layout per drawings) b. 教學輔助設備符合課程及可操作 (instructional aids per curriculum and operational) c. 工場環境 (Shop environment) d. 設施大小及其位置 (Facility size and location)			
	2. 材料 (第1冊, 第5,6節) Materials (vol 1, section 5 and 6) a. 儲存良好 (Properly stored) b. 對等級言為適當 (Adequate for ratings)			
	3. 工具 (第1冊, 第5,6節) Tools (vol 1, Section 5 and 6) a. 訓練機構工具 (School tools) b. 學生工具 (Student tools)			
	4. 記錄保持 (第1冊, 第5,6節) Record Keeping (vol 1, Section 5 and 6) a. 工具清單及校準 (Tool inventory and calibration) b. 適時性與更新技術性教學材料 (Currency and updating technical instructional materials)			
備註 Remarks: <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>				

檢查員簽名：

Inspector Signature: \_\_\_\_\_

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## PROCEDURE 3 APPROVAL PROCEDURES FOR SPECIAL OPERATIONS

**1. OBJECTIVE.** This chapter describes the basic procedures for authorizing airlines to conduct special operations regarding to RNP, RVSM, ETOPS, CAT II & III, etc.

**2. GENERAL.** This job aid shall be used by Operations, Maintenance and Avionics personnel in any approval process. This approval process consists of five phases with the aid of existing specific job functions, job aids and is conducted IAW with ICAO, CAA or FAA data, policy and procedures. The items contained in job aids and job functions can be modified to satisfy the particular operation to be authorized. Some items in the job aids and job functions may not apply and can be signed off as not applicable. Others may be added to satisfy the particular procedure.

### 3. APPROVAL PROCESS

- Pre-application Phase
- Formal application Phase
- Document Compliance Phase
- Demonstration Phase
- Final Approval Phase

### 4. PRE-APPLICATION PHASE.

**A. Initial Inquiry.** An initial request for information regarding the special operation to be authorized may be verbal, however it must be confirmed in writing.

**B. The Merger Team.** After written merger confirmation has been received by Flight Standards, the Director will assign a team consisting of the three specialties and assign a project manager. This project manager will be the primary contact person.

**C.** The Project Manager will schedule periodic meetings with his team, keep management informed and schedule a pre-application with the applicant.

#### D. Pre-application Meeting.

1. The agenda of the meetings should contain at least the following:

- Schedule of events
  - Dates of proposed operation
  - Management personnel
  - Organizational structure
  - Equipment
  - Facilities
  - Manuals
  - Programs
    - Training/Cross-Training, Cat 2/3, ETOPS, RVSM., etc.
    - Contracts/Leases
    - Interim procedures with dates of final submission
    - Interim Operations Specifications
    - Any other required items

## **5. FORMAL APPLICATION PHASE.**

- A. During the formal application the schedule of events is reviewed to insure that all applicable items discussed during the pre-application meeting are included.
- B. Review schedule of events and insure dates are realistic and that CAA manpower is available.

## **6. DOCUMENT COMPLIANCE PHASE.**

- A. Review manuals and programs to insure content meets CAA regulations, policy and/or other approved or accepted data..
- B. Correct noted deficiencies if any.

## **7. DEMONSTRATION AND INSPECTION PHASE.**

- A. During this phase the team determines that the proposed procedures and programs for training and directing personnel in the performance of their duties are effective. Emphasis is on compliance with regulations and safe operating practices.
- B. Observation and Monitoring of Events. The manner in which the applicant is to be evaluated while conducting different segments of this phase is outlined in various sections of this handbook. Specific handbook references for each activity or event are referenced on the certification job aid/job function.
- C. Demonstration and Inspection Deficiencies. If at any time during the demonstration and inspection phase the applicant does not meet the schedule of events, or his conduct of various activities (such as training, MEL, record keeping, etc.) proves to be deficient corrective action must be taken.

## **8. FINAL APPROVAL PHASE.**

- A. Accept or approve final programs, manuals and issue appropriate Operations Specifications.
- B. Approval/Certification Report. When the merger process is completed the Project Manager is responsible for assembling the approval/certification report. This report will be signed by the Project Manager and will include the names and title of each team member. The report will consist of:
  - Schedule of events
  - Job Aids
  - Job Functions
  - Operations Specifications
  - Summary of Major Difficulties experienced during the approval process including recommendations which may enhance future approvals or certifications.

## **9. FUTURE ACTIVITIES.**

- A. Prepare operator surveillance program
  - Assigned ASI should carefully observe the operator for the first 90 days.

Additional surveillance may be necessary to determine operating practices are performed at an adequate level of safety and per manual procedures.



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- B. The ASI may detect a need for changes in the methods, operation, inspection, and/or maintenance during this early surveillance period and must request changes to any observed deficiencies.

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## **PROCEDURE 4 REPAIR STATION CERTIFICATION PROCESS**

### **1.GENERAL**

The following contains the procedures for the certification of a CAR 145 Repair Station. The certification process may be conducted by one or more qualified inspectors. When more than one inspector is involved, a CPM should be assigned by the CAA.

It is imperative that all team members are experienced in the certification process, are team oriented, have the ability to analyze systems and are able to communicate effectively in written and oral presentations. This is an excellent opportunity for training other inspector personnel to observe and /or to participate in the certification process under supervision.

The certification process, when followed by the aviation safety inspector (ASI), will result in the applicant's compliance with the CAA 145 Repair Station Regulations. Under no circumstances will an applicant be certificated until the CAA is assured that the applicant is capable of fulfilling responsibilities and complying with the CAA regulations in an appropriate and continuing matter. The certification process must be used with good judgment. Some phases may be combined depending on the size of the repair station.

FAILURE OF THIS TEAM TO PROPERLY ACCOMPLISH THIS CERTIFICATION  
PROCESS HAS A DIRECT IMPACT ON AVIATION SAFETY AND PUBLIC INTEREST.

### **2.THE FIVE PHASE CERTIFICATION PROCESS.**

The certification process provides for interaction between the applicant and the CAA, from initial inquiry to final approval or denial. The processes consists of:

- \* Pre-application Phase
- \* Formal Application Phase
- \* Document Compliance Phase
- \* Demonstration and Inspection Phase
- \* Certification Phase

### **3.PREAPPLICATION PHASE.**

#### **3.1.Initial Inquiry.**

An initial request for information regarding certification may be verbal or in writing, and must be provided to the CAA at the time the applicant starts its planning and preparation.

#### **3.2.The Pre-application Statement of Intent (PASI) shall be given at the earliest opportunity after the appropriate sections are discussed with the applicant. These discussions must also include the requirement of the applicant to become familiar and have in possession CAR 145 and other regulations/documents.**

3.2.1.When the applicant returns the PASI it shows intent and prompts the CAA to allocate resources. A PASI should be submitted only after the applicant has reviewed the appropriate regulations.

3.3.The Certification Team. The CAA will select a certification team consisting of one or more inspectors.

3.3.1.The CAA will designate one team member as a Certification Project Manager (CPM) when more than one inspector is required. The Certification Project Manager is the primary spokesperson for the CAA throughout the certification process. When a single inspector is required, that inspector will assume the CPM duties and responsibilities.

3.3.1.1.The Certification Project Manager is the primary contact with the applicant. The Certification Project Manager schedules and conducts meetings and coordinates any correspondence with the applicant.

3.3.1.2.The Certification Project Manager must be sure each certification task is completed in an acceptable and timely manner. Responsibilities include ensuring that all certification matters are thoroughly coordinated with each team member.

3.3.1.3.The Certification Project Manager should schedule periodic meetings with the certification team and CAA management to ensure that everyone is fully informed of the current status of the certification. The Certification Project Manager must notify CAA management of any information that may significantly affect or delay certification or that may attract media or political interest.

3.3.2.Each team member will respond to requests for assistance made by the Certification Project Manager and keep the Certification Project Manager apprised of the status of the certification. Anything that may delay certification must be brought to the attention of the Certification Project Manager immediately.

**NOTE:** Although guidance should be provided to the applicant, it is important that each document, procedure, demonstration, or inspection reflects the applicant's knowledge, skills, and abilities. Therefore, refrain from providing explicit instructions on how a task should be accomplished.

3.4.Pre-application Meeting.

3.4.1.Arrangements for the Pre-application Meeting.

After being assigned, the CPM shall contact the applicant to arrange a pre-application meeting. The applicant should be advised that the key management personnel listed on the PASI should attend the pre-application meeting, and should be prepared to discuss specific aspects of the applicant's proposed operation in general terms.

3.4.2.Package of Pre-certification Information.

The pre-application meeting between the CPM, other certification team members, and the applicant sets the tone for the rest of the certification process. Therefore, it is important that the CPM be thoroughly prepared to conduct the meeting. The CPM should review the PASI and assemble a pre-certification information package to be given to the applicant. The pre-certification information package shall consist of at least the following:

- \* Applicable sections of the Certification Job Aid
- \* Sample Schedule of Events format

### 3.4.3. Briefing of the Applicant.

At the pre-application meeting, the applicant and any of his key personnel attending the meeting should be briefed in as much detail as necessary to ensure that they understand the certification process. The CPM should use the applicable sections of the Certification Job Aid, and the Schedule of Events format as guides to facilitate the discussion and to ensure that all elements of the certification process are covered.

### 3.4.4. Verifying the Information on the PASI.

The first item for discussion should be verification of the information on the PASI. When changes to this information have occurred, the applicant must annotate the changes on the PASI..

### 3.4.5. Informing the Applicant of CAR 145 requirements.

The applicant and his personnel must be made aware of their responsibilities during the certification process. It is to their benefit to submit required items as soon as they become available and to notify the CPM immediately of any problems or changes in the proposed operation.

### 3.4.6. Formal Application Letter.

The CPM shall inform the applicant that the formal application must be a letter containing a statement that the letter serves as a formal application for the repair station certificate. The letter must contain the full and official name of the applicant. This letter must be signed by the owner when applying as an individual, all partners when applying as a partnership, or an authorized officer(s) when applying as an organization such as a company or a corporation. The letter shall contain the physical location address of the applicant's intended primary operating location. The applicant's mailing address shall be included in the formal application letter if different than its letterhead. Additionally, the letter will confirm the identity of key management personnel.

### 3.4.7. Application Attachments.

The formal application letter must be accompanied with at least the attachments described in the following subparagraphs. The applicant must understand that this letter and these attachments will be the minimum information acceptable.

#### 3.4.7.1. Schedule of Events.

The applicant needs to understand that the Schedule of Events is a key document to be presented with the formal application. The Schedule of Events is a list of items, activities, programs, and facilities which the applicant must accomplish or make ready for CAA inspection before certification. The Schedule of Events will include the applicant's best estimate of the date, the item, activity, program, and facilities are ready for inspection. The applicant shall be informed that the Schedule of Events must be constructed in a logical and sequential manner. The Schedule of Events must also provide for a reasonable amount of time for the CAA to review and accept or approve each item or event, before scheduling other items or events that are dependent on such acceptance or approval. The applicant should be informed that failure to accomplish an item or event in a satisfactory or timely manner in accordance with the Schedule of Events could result in a delay in certification. The

applicant should be advised that if deficiencies are detected during the review of manuals and other documents, they will be returned for amendment or correction. Such action may also cause additional delays in the certification process.

#### 3.4.7.2.Initial Compliance Statement

3.4.7.2.1.Preparation of the initial compliance statement and ultimately the final compliance statement benefit the applicant by systematically ensuring that all applicable regulatory aspects are appropriately addressed during the certification process. The initial compliance statement shall be in the form of a complete listing of all regulatory sections pertinent to the authorization the applicant is proposing. This list should reference applicable subparts and each relevant section of the subparts. Next to each section, the applicant must provide a brief narrative description or preferably a specific reference to a manual, or other documents, which describe how each regulation will be complied with, if known, at the time the formal application is submitted.

3.4.7.2.2.The list of the specific regulations and subparts can be arranged so that when the method of compliance is formalized, the description or reference can be added to the list in preparation for the final compliance statement. The applicant shall be advised that the final compliance statement must be submitted, reviewed, and accepted before the certification is complete.

#### 3.4.7.3.Application Requirements for the Repair Station Certificate.

During the pre-application meeting the repair station management staff must be informed that they must submit to the CAA as a minimum, the following:

3.4.7.3.1.A Repair station manual acceptable to the CAA as required by 145.207 with manual content as contained in 145.209:

(Sec. 145.207 Repair station manual)

- \* A certificated repair station must prepare and follow a repair station manual acceptable to the CAA.
- \* A certificated repair station must maintain a current repair station manual.
- \* A certificated repair station's current repair station manual must be accessible for use by repair station personnel required by subpart D of this regulation.
- \* A certificated repair station must provide to the CAA the current repair station manual in a format acceptable to the CAA.
- \* A certificated repair station must notify the CAA of each revision of its repair station manual in accordance with the procedures required by Sec. 145.209(j).

(Sec. 145.209 Repair station manual contents)

A certificated repair station's manual must include the following:

\*An organizational chart identifying—

Each management position with authority to act on behalf of the repair station,

The area of responsibility assigned to each management position, andThe duties, responsibilities, and authority of each management position;

\* Procedures for maintaining and revising the rosters required by Sec. 145.161;

\* A description of the certificated repair station's operations, including the housing, facilities, equipment, and materials as required by subpart C of this CAR;

\* Procedures for—

Revising the capability list provided for in Sec. 145.215 and notifying the CAA of revisions to the list, and the self-evaluation required under Sec. 145.215(c) for revising the capability list, including methods and frequency of such evaluations, and procedures for reporting the results to the appropriate manager for review and action;

\* Procedures for revising the training program required by Sec. 145.163 and submitting revisions to the CAA for approval;

\* Procedures to govern work performed at another location in accordance with Sec. 145.203;

\* Procedures for maintenance, preventive maintenance, or alterations performed under Sec. 145.205;

\* Procedures for maintaining and revising the contract maintenance information required by Sec. 145.217(a)(2)(i), and maintaining and revising the contract maintenance information required by Sec. 145.217(a)(2)(ii) and notifying the CAA of revisions to this information;

\* A description of the required records and the recordkeeping system used to obtain, store, and retrieve the required records;

\* Procedures for revising the repair station's manual and notifying the CAA of revisions to the manual; and

\* A description of the system used to identify and control sections of the repair station manual.

3.4.7.3.2. Quality Control Manual acceptable to the CAA as required by 145.211.

(Sec. 145.211 Quality control system)

- \* A certificated repair station must establish and maintain a quality control system acceptable to the CAA that ensures the airworthiness of the articles on which the repair station or any of its contractors performs maintenance, preventive maintenance, or alterations.
- \* Repair station personnel must follow the quality control system when performing maintenance, preventive maintenance, or alterations under the repair station certificate and operations specifications.
- \* A certificated repair station must prepare and keep current a quality control manual in a format acceptable to the CAA that includes the following:
  - \*\* A description of the system and procedures used for Inspecting incoming raw materials to ensure acceptable quality;
  - Performing preliminary inspection of all articles that are maintained;
  - Inspecting all articles that have been involved in an accident for hidden damage before maintenance, preventive maintenance, or alteration is performed;
  - Establishing and maintaining proficiency of inspection personnel;
  - Establishing and maintaining current technical data for maintaining articles;
  - Qualifying and surveilling non-certificated persons who perform maintenance, prevention maintenance, or alterations for the repair station;
  - Performing final inspection and return to service of maintained articles;
  - Calibrating measuring and test equipment used in maintaining articles, including the intervals at which the equipment will be calibrated; and taking corrective action on deficiencies;
  - References, where applicable, to the manufacturer's inspection standards for a particular article, including reference to any data specified by that manufacturer;
  - A sample of the inspection and maintenance forms and instructions for completing such forms or a reference to a separate forms manual; and
  - Procedures for revising the quality control manual required under this section and notifying the CAA of the revisions.



\* A certificated repair station must notify the CAA of revisions to its quality control manual.

3.4.7.3.3. A list by type, make, or model, as appropriate, of each article for which the application is made;

3.4.7.3.4. An organizational chart of the repair station and the names and titles of managing and supervisory personnel;

3.4.7.3.5. A description of the housing and facilities, including the physical address, in accordance with Sec. 145.103;

(Sec. 145.103 Housing and facilities requirements)

\* Each certificated repair station must provide—

\*\*Housing for the facilities, equipment, materials, and personnel consistent with its ratings.

\*\*Facilities for properly performing the maintenance, preventive maintenance, or alterations of articles or the specialized services for which it is rated. Facilities must include the following:

Sufficient workspace and areas for the proper segregation and protection of articles during all maintenance, preventive maintenance, or alterations;

Segregated work areas enabling environmentally hazardous or sensitive operations such as painting, cleaning, welding, avionics work, electronic work, and machining to be done properly and in a manner that does not adversely affect other maintenance or alteration articles or activities;

Suitable racks, hoists, trays, stands, and other segregation means for the storage and protection of all articles undergoing maintenance, preventive maintenance, or alterations;

Space sufficient to segregate articles and materials stocked for installation from those articles undergoing maintenance, preventive maintenance, or alterations; and

Ventilation, lighting, and control of temperature, humidity, and other climatic conditions sufficient to ensure personnel perform maintenance, preventive maintenance, or alterations to the standards required by this CAR.

\*\*A certificated repair station with an airframe rating must provide suitable permanent housing to enclose the largest type and model of aircraft listed on its operations specifications.

\*\*A certificated repair station may perform maintenance, preventive maintenance, or alterations on articles outside of its housing if it provides suitable facilities that are acceptable to the CAA and meet the requirements of Sec. 145.103(a) so that

the work can be done in accordance with the requirements of CAA regulations.

3.4.7.3.6. A list of the maintenance functions, for approval by the CAA, to be performed for the repair station under contract by another person in accordance with Sec. 145.217; (Sec. 145.217 Contract maintenance)

\* A certificated repair station may contract a maintenance function pertaining to an article to an outside source provided

\*\*The CAA approves the maintenance function to be contracted to the outside source; and

\*\*the repair station maintains and makes available to the CAA, in a format acceptable to the CAA, the following information:

The maintenance functions contracted to each outside facility; and

The name of each outside facility to whom the repair station contracts maintenance functions and the type of certificate and ratings, if any, held by each facility.

\*\*A certificated repair station may contract a maintenance function pertaining to an article to a non-certificated person provided--

The non-certificated person follows a quality control system equivalent to the system followed by the certificated repair station;

The certificated repair station remains directly in charge of the work performed by the non-certificated person; and The certificated repair station verifies, by test and/or inspection, that the work has been performed satisfactorily by the non-certificated person and that the article is airworthy before approving it for return to service.

A certificated repair station may not provide only approval for return to service of a complete type-certificated product following contract maintenance, preventive maintenance, or alterations.

3.4.7.3.7. A training program for approval by the CAA in accordance with Sec. 145.163. (Sec. 145.163 Training requirements.)

\* certificated repair station must have an employee training program approved by the CAA that consists of initial and recurrent training. For purposes of meeting the requirements of this paragraph, beginning April 6, 2005--

**\*\*An applicant for a repair station certificate must submit a training program for approval by the CAA as required by Sec. 145.51(a)(7).**

**\*\*A repair station certificated before that date must submit its training program to the CAA for approval by the last day of the month in which its repair station certificate was issued.**

**\* The training program must ensure each employee assigned to perform maintenance, preventive maintenance, or alterations, and inspection functions is capable of performing the assigned task.**

**\*A certificated repair station must document, in a format acceptable to the CAA, the individual employee training required under paragraph (a) of this section. These training records must be retained for a minimum of 2 years.**

**\* A certificated repair station must submit revisions to its training program to the CAA in accordance with the procedures required by Sec. 145.209(e).**

**3.4.7.3.8.The equipment, personnel, technical data, and housing and facilities required for the certificate and rating, or for an additional rating must be in place for inspection at the time of certification or rating approval by the CAA. An applicant may meet the equipment requirement of this paragraph if the applicant has a contract acceptable to the CAA with another person to make the equipment available to the applicant at the time of certification and at any time that it is necessary when the relevant work is being performed by the repair station.**

**3.4.7.3.9.In addition to meeting the other applicable requirements for a repair station certificate and rating, an applicant for a repair station certificate and rating located outside the R.O.C. must meet the following requirements :**

**\* The applicant must show that the repair station certificate and/or rating is necessary for maintaining or altering the following:**

**\*\*R.O.C. registered aircraft and articles for use on R.O.C. registered aircraft, or**

**\*\*Foreign-registered aircraft operated under the provisions of CAA regulations, and articles for use on these aircraft.**

**\* The applicant must show that the fee prescribed by the CAA has been paid.**

**3.4.7.3.10.An application for an additional rating, amended repair station certificate, or renewal of a repair station certificate must be made in a format acceptable to the CAA. The application must include only that information necessary to substantiate the change or renewal of the certificate.**

#### 3.4.7.4. Conclusion of Pre-application Meeting.

The CPM must ensure that the applicant understands that the formal application, with the previously described attachments, must be complete and acceptable or the entire formal application will be rejected.

### 4. FORMAL APPLICATION PHASE.

Upon receipt of a formal application, the certification team must initially review it and make a determination of its acceptability within the next 5 working days. The initial review serves two purposes and verifies that at least those items required for formal application have been submitted. The minimum required items are as follows:

- \* The formal letter requesting certification.
- \* The required formal application attachments
- \* Schedule of Events
- \* Repair Station Manual
- \* Quality Control Manual
- \* Capability List
- \* Organizational Chart
- \* Initial Training Program

The initial review also permits a determination of whether the submitted material represents a feasible proposal and is of sufficient quality to allow for a productive formal application meeting and to proceed with the certification process. If the CAA is unable to meet the Schedule of Events, the CAA will negotiate with the applicant for an acceptable time frame.

### 5. DOCUMENT COMPLIANCE PHASE

#### 5.1. General

5.1.1. The document compliance phase is that part of the certification process when the applicant's manuals and other documents are reviewed and either accepted, approved, or rejected, as appropriate. Each submission by the applicant will be given an in-depth review to ensure it complies with applicable regulations and conforms to safe operating practices.

5.1.2. It should be noted that to ensure clarity, the document compliance phase and the demonstration and inspection phase are discussed individually. In practice, however, these two phases overlap. For example, when a training program has been initially approved, the operator may begin his training while other manuals and program elements are being reviewed. As another example, review of the final compliance statement is the last element of the document compliance phase. However, the final compliance statement is normally reviewed and accepted just before final authorization. Review of Applicant's Submissions : During this phase, members of the certification team evaluate and approve the applicant's manuals and any other required documents.

#### 5.2. The Final Compliance Statement.

5.2.1.The final compliance statement serves the following two purposes:

5.2.1.1.It ensures the applicant has adequately addressed all regulatory requirements applicable to the proposed authorization.

5.2.1.2.It aids the certification team in determining where the regulatory requirements have been addressed in the applicant's manuals, programs, and procedures.

5.2.2.If the applicant's final compliance statement does not serve the preceding purposes, it shall be returned with a letter outlining the deficient areas. The applicant's methods of compliance will be evaluated throughout the demonstration and inspection phase.

5.3.Document Deficiencies.

5.3.1.If the team's review reveals deficiencies in the applicant's submissions, on the spot corrections should be encouraged. If on the spot corrections cannot be made, the CPM should return the manual or document to the applicant with a letter outlining the deficient areas. The team should be ready to offer suggestions on how to improve the product but avoid "writing" the applicant's manual. The certification team should remember that it is the applicant's responsibility to develop manuals and procedures that ensure safe operating practices and compliance with the rules.

## **6.DEMONSTRATIONS AND INSPECTION PHASE**

6.1.General.

In this phase the certification team determines that the applicant's proposed procedures and programs for training and directing personnel in the performance of their duties are effective. In this phase the emphasis is on compliance with regulations and safe operating practices.

6.2.Observations and Monitoring of Events.

Through observation and other forms of on site evaluation during the demonstration and inspection phase, members of the certification team observe and monitor many types of applicant activities. The following list of activities or events is representative of events which occur in the demonstration and inspection phase. This list is not all-inclusive and certain items may not be applicable to a particular type of operator:

- \* Conduct/monitoring of Training Programs
- \* Facilities (equipment, procedures, and personnel)
- \* Record-keeping Procedures, i.e. training, dangerous goods shipments, etc.

6.3.Demonstration and Inspection Deficiencies.

6.3.1.If at any time during the demonstration and inspection phase the applicant does not meet the Schedule of Events, or his conduct of various activities (such as training) or other items proves to be deficient, appropriate corrective action must be taken.

## **7.CERTIFICATION PHASE**

7.1.General.

The approved repair station certificate and operations specifications are issued to the applicant after all significant unsatisfactory items have been corrected.

7.2.Certification Report.

When the new operator is certificated, the CPM is responsible for assembling a certification report. This report must be signed by the CPM and will include the name and title of each team member who assisted in the certification project. The report shall consist of 10 sections, a through h, as follows:

- a. The Pre-application Statement of Intent
- b. The Certification Job Aid
- c. The Formal Application letter
- d. The Schedule of Events
- e. The Final Compliance Statement
- f. A copy of the Certificate and Operations Specifications issued
- g. A summary of major difficulties experienced during the certification process and/or any recommendations that may enhance the process must be noted by phase.
  - \* Pre-application Phase.  
Include summaries of difficulties or recommendations.
  - \* Formal Application Phase.  
Include summaries of difficulties or recommendations.
  - \* Document Compliance Phase.  
Include summaries of difficulties or recommendations.
  - \* Demonstration and Inspection Phase.  
Include summaries of difficulties or recommendations.
- h. Certification Report Distribution.  
The CAA shall retain the certification report.

## **8.FUTURE ACTIVITIES**

### **8.1.Transition.**

The CAA must ensure that there is an orderly transition from the certification process to the surveillance process.

### **8.2.Post certification surveillance.**

Assigned ASIs should carefully observe the operator during the first 120 days of operation. Additional inspections may be necessary to determine operating practices are performed at an adequate level of safety.

8.2.1.Particular attention should be directed to areas that may not have been demonstrated or observed during certification.

8.2.2.Prepare ASI annual oversight program.

APPENDIX 1

INSTRUCTIONS FOR COMPLETING  
PREAPPLICATION STATEMENT OF INTENT

SECTION 1. Must be completed must be completed by all applicants.

1. Enter the company's official name and mailing address.
2. This address must be the physical location the main base.
3. Enter the estimated date when-operations or services will begin.
4. This information will be used to assign a company identification number. You may indicate up to three, three-letter identifiers, such as ABC, or XYZ. If all choices have been assigned to other operators or agencies, a random selected number will be assigned.
5. Enter the names, titles, and telephone numbers of required management personnel for dangerous goods.
6. The proposed type of repair station must be indicated. Check as many boxes as apply.
7. Additional information as required by the applicant.

## PREAPPLICATION STATEMENT OF INTENT(申請前意圖陳述)

PREAPPLICATION STATEMENT OF INTENT (申請前意圖陳述)		
Section段 1A. To Be Completed By All Applicants 由所有申請人填寫完成		
1. Name and mailing address of company公司名稱及郵遞地址		2.Address of physical base where operations will be conducted主要作業基地之地址
3.Proposed startup date 預定開始日期	4.(3)Requested three-letter company identifier in order or preference欲申請之公司識別碼(3個字母)，按優先順序排列 1. _____ 2. _____ 3. _____	
5. Management Personnel管理人員		
Name (Last, first, middle) 姓名	Title職稱	Telephone (including area code)電話號碼 (包括區域代碼)
Section 1B.To Be Completed By Air Operator第1B部分 由申請航空使用人填寫完成		
6. ____ Approval for Dangerous Goods Authorization ____位危險物品認可授權人員		
Section 1C.To Be Completed By Air Agency第1C部分 由申請維修廠所者填寫完成		
7. Proposed type of operation Proposed type of agency and rating(s) 申請之機構及檢定類別		



## PREAPPLICATION STATEMENT OF INTENT

(申請前意圖陳述)

Section段 1E. To Be Completed By All Applicants第1E部分 由所有申請人填寫完成		
8. Additional information that provides a better understanding of the proposed operation or business(attach additional sheet, if necessary)為增進對所申請作業或業務瞭解所提供之額外資料(如需要，另附其他頁次)		
9. The statements and information contained on this form denote an intent to apply for CAA certification 此表格內之陳述及資料表示欲向民航局申請檢定之意願		
Signature簽名	Date日期	Name and Title姓名及職稱
Section 2E. To Be Completed By Office 第2E部分由 單位填寫		
Received by CAA 民航局收件		
Data:資料		For用途: Information only僅為提供資訊
Remarks:備註		

中華民國交通部民用航空局 民用航空器修理廠、所檢定申請書 Civil Aeronautics Administration of MOTC, Republic of China Application for Repair Station Certification							
一、申請者 Applicant						四、經濟部工廠登記證編號 Certificate No. of Facility Registration	
二、修理廠名稱 Official Name of Repair Station							
三、工廠地址 Address							
五、申請原因 Reason of application	初次申請(Initial)		增加檢定(Amend a Rating)		變更廠名(Change official name of repair station)	變更廠主 (New owner)	
	屆期換證(Renewal)		變更檢定(Revise a Rating)		變更廠址(Change Location of facility)		
六、申請檢定種類 Rating	類別 Class	限制檢定項目 Limited Ratings					
(一) 機 種 Airframe							
(二) 發 動 機 Powerplant							
(三) 螺旋槳及旋翼 Propeller and Rotor							
(四) 無 線 電 Radio							
(五) 儀 器 Instrument							
(六) 附 件 Accessory							
(七) 特 業 修 護 Specialized Service							
七、附 送 文 件 Application Attachment	(一) 工廠登記證影本 Copy of Facility Registration Certificate				(二) 組織系統表 Systematic Table		
	(三) 廠房設施平面佈置圖 Drawing of Facility Layout				(四) 主要設備清單 List of Main Equipment		
	(五) 修護能量表 Capability List				(六) 檢驗作業手冊 Inspection Procedure Manual		
八、申請人 Applicant		(職 稱) (Title)	(姓 名) (Name)		(簽 章) (Signature)		
擬 辦 (Recommendation) (雙線以下由民航局使用 For CAA Use Only)							
		A. 檢查情況符合 CAA 法規 06-02A 之需求。Station was found to comply with requirements of CAA 06-02A.					
		B. 核准。Approval.					
		C. 不予核准。Disapproval.					
		D. 其它說明。Other Descriptions.					

批 示 (Approval)			
核給證書編號 Certificate No.		給 證 日 期 Date of Certificate Issued	

能力修訂表

CAPABILITY LIST AMENDMENT

1、件號 PART NUMBER/型別 MODEL : \_\_\_\_\_

2、說明 DESCRIPTION(零件名稱 PART NAME) : \_\_\_\_\_

3、製造廠家 MANUFACTURER/VENDOR : \_\_\_\_\_

4、公司能量 COMPANY CAPABILITY :      /      5、適用機型 APPL. A/C MODEL : \_\_\_\_\_

    a. ☐ 翻修 OVERHAUL \_\_\_\_\_

    b. ☐ 修理 REPAIR \_\_\_\_\_

    c. ☐ 檢查 INSPECTION \_\_\_\_\_

    d. ☐ 測試 TESTING \_\_\_\_\_

    e. ☐ 量校 CALIBRATION \_\_\_\_\_

6、ATA 號碼 ATA CODE : \_\_\_\_\_

7、設施 ADEQUATE FACILITY : \_\_\_\_\_

8、核準測試裝備 APPROVED TEST EQUIPMENT : \_\_\_\_\_

9、核準技術資料 APPROVED TECHNICAL DATA : \_\_\_\_\_

    (適用規範 APPL. SPECIFICATION) \_\_\_\_\_

10、完訓/合格人員 TRAINED/QUALIFIED PERSONNEL : \_\_\_\_\_

11、雜項資料 MISCELLANEOUS INFORMATION : \_\_\_\_\_

12、權責工場 REPOSIBLE WORKSHOP : \_\_\_\_\_

13、支援廠商 CONTRACT OUTSIDE AGENCY : \_\_\_\_\_

    支援工作 CONTRACT TYPE WORK: \_\_\_\_\_

14、修訂本表人員 TITLE SHOP PERSON AMENDING LIST : \_\_\_\_\_

    簽字 SIGNATURE : \_\_\_\_\_ 日期 DATE : \_\_\_\_\_

15、核準此修訂之人員 TITLE COMPANY PERSON APPROVEING AMENDMENT : \_\_\_\_\_

    簽字 SIGNATURE : \_\_\_\_\_ 日期 DATE : \_\_\_\_\_

16、民航局檢定類別 CAA RATING INVOLVED : \_\_\_\_\_

17、民航局同意 CAA ACCEPTANCE :

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# AIRWORTHINESS INSPECTOR'S HANDBOOK

(公司名稱 COMPANY NAME)  
 民用航空局檢定修理廠 CAA CERTIFICATED REPAIR STATION  
 能量表 CAPABILITY LIST  
 (公司部門/工場 COMPANY DIVISION/SHOP)

製造廠家 MANUFACTURE OR VENDOR	型別 MODEL	零件名稱 PART NAME	件號 PART NUMBER	ATA 號碼 ATA CODE	檢定類別 CAA RATING	能量 CAP	適用機型 MODEL AIRCRAFT					適用規範 APPLICABLE SPEC.	合約廠商/項目	
													CONT. AGENC.	ASSIST. WORK

caarscap.doc  
 Date of Issue:

REMARK:

CAP----- O: Overhaul

R: Repair

I: Inspection

T: Testing

C: Calibration

Revision:

Page:

MAR 07, 2016

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(修理廠 REPAIR STATION)  
主要裝備清單 MAIN EQUIPMENT LIST

[illegible]

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caarsmel

日期 Date of Issue :

修訂次數 Revision :

頁次 Page :

**維修廠營運規範檢定工作進度表**  
**Certification for Operation Specification of Repair Station**  
**Schedule of Events**

公司名稱(申請人): OFFICAL NAME OF COMPANY:		公司(申請人)地址: Location Address of Applicant:		
維修廠登記證號: Certificate No. of Repair Station:		通信地址: Mail Address:		
<b>申請前階段</b> <b>PRE-APPLICATION PHASE</b>				
預定送審日期 Scheduled date of submission	申請前階段之工作進度 Events of Pre-Application Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	1. 申請前意圖陳述 Pre-application Statement of Intent			
	2. 申請前會議 Pre-application Meeting			
備註: Remark:				

<b>正式申請階段</b> <b>FORMAL APPLICATION PHASE</b>				
預定送審日期 Scheduled date of submission	正式申請階段之工作進度 Events of Formal Application Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned For Changes	核准/接受日期 Data Approved/ Accepted
	1. 正式申請函 Formal Application Letter			
	A. 公司正式名稱 Full and Official Name			
	B. 通信地址 Mailing Address			
	C. 主要作業地區(主作業基地) Primary Operating Location (Main Base)			
	D. 主要管理人員名單 List of Management Personnel Names			
	E. 維修廠檢定申請書			

## AIRWORTHINESS INSPECTOR'S HANDBOOK

	Application for Repair Station Certificate and/or Rating			
	2.正式申請附件 Attachments of Formal Application Letter			
	A.工作進度表 Schedule of Events			
	B.初步符合法規之陳述 Initial Compliance Statement			
	C.維修廠手冊 Repair Station Manual			
	D.品質管理手冊 Quality Control Manual			
	E.安全管理手冊 Safety Management Manual			
	F.檢定相關能量修訂表 Capability List which relevant to Certification			
	G.組織系統表、維修廠管理人及主 要管理、督導、檢驗人員姓名/ 職稱/資歷名冊 Systematic table of organization, Accountable Manager and List of Name/Title/Resume of key managing and supervisory, Inspection personnel			
	H.廠房與設施說明及平面佈置圖 Description and layout of Repair Station housing and facility			
	I.主要裝備清單 List of main equipment			
	J.委託維修作業(如適用) Subcontract maintenance (if applicable)			
	a.預備委外維修之清冊及說明 List of maintenance functions to be performed by subcontractor			
	b.相關委外維修合約協議及其維 修廠檢定證書影本 Photocopy of Maintenance Contracts and Certificate of other Repair Station			
	K.維修訓練手冊 Maintenance Training Manual			
	L.維修規範及手冊 Approved maintenance specification and manual			



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	M.危險物品處理人員之訓練合格證明 Training Certificate or Document of Dangerous Goods Handling Personnel			
	N.其他要求(外國籍維修廠適用) Other Requirements(for foreign repair station only)			
	a.所在國民航主管機關所核發之檢定證書及營運規範 Certificate of repair station and operation Specification issued by Local Civil Aviation Authority			
	b.我國籍使用人之委託維修合約或意向書 Maintenance Contract or Letter of Intent signed by R.O.C. Operator			
備註： Remark:				

文件符合階段 DOCUMENT COMPLIANCE PHASE				
預定送審日期 Scheduled date of submission	文件符合階段之工作進度 Events of Document Compliance Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	1.完整填寫之維修廠檢定申請書 Completed Application for Repair Station Certificate and/or Rating			
	2.申請有限制之檢定類別，述明維護項目之原製造廠家、型別及工作特性清單 List of makes and model for limited rating			
	3.評估主要管理人員資格 Evaluate Qualification of Key Management Personnel			
	A.維修廠管理人 Accountable Manager			
	B.維護負責人 Director of Maintenance			
	C.品管負責人員 Director of Quality			

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	4.評估公司作業手冊/程序 Evaluate Applicable Company Manuals/Procedure			
	A.維修廠手冊 Repair Station Manual			
	B.品質管理手冊 Quality Control Manual			
	C.維修訓練手冊 Maintenance Training Manual			
	D.安全管理系統手冊 Safety Management Manual			
	5.製造廠家維修規範及手冊 Manufacture's specification and manual			
	6.特業維護類別檢定之作業規範影本 Copy of approved specification for specialized service rating			
	7.維護相關技術手冊 Maintenance Technical Manual			
	A.機體/動力系統 Airframe / Power plant System			
	B.結構維修 Structure Repair			
	C.零件目錄 Illustrated Parts Catalogue			
	D.非破壞性檢驗程序 NDT Inspection Procedures			
	E.製造廠/供應商手冊 Manufacture's or Vendor's Manual			
	F.線路手冊 Wiring Manual			
	G.翻修手冊 Overhaul Manual			
	8.其他評估 Other Evaluations			
	A.組織系統表、維修廠管理人及主要管理、督導人員姓名/職稱/資歷名冊 Systematic table of organization, Accountable Manager and List of Name/Title/Resume of key managing and supervisory personnel			
	B.廠房與設施說明及平面佈置圖 Description and layout of Repair Station housing and facility			
	C.主要裝備清單 List of main equipment			
	D.檢定相關能量修訂表 Capability List which relevant to Certification			

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	E.委託維修作業及其合約 Subcontract maintenance and Contracts			
	F.訓練合約(如適用) Training Contracts (If Applicable)			
	9.最後符合陳述 Final Compliance Statement			
備註： Remark:				

驗證檢查階段 DEMONSTRATION PHASE				
預定檢查日期 Scheduled date of inspection	驗證檢查階段之工作進度 Events of Demonstration Phase	接收/完成日期 Data Received /Accomplished	退回修改日期 Data Returned for Changes	核准/接受日期 Data Approved/ Accepted
	1.協調檢查時間 Coordinate and Schedule an Inspection			
	2.執行廠房及設施檢查 Perform Housing and Facility Inspection			
	3.檢查及評估維修組織及授權人員資格 Inspect / Evaluate Maintenance Organization and Qualification of Authorized Personnel			
	4.停機線及場站設施檢查(如適用) Inspect Line Station Facilities (if applicable)			
	5.維修能量表檢定 Inspect Items Listed in Capability List			
	6.安全管理系統檢查 Inspect Safety Management System			
備註： Remark:				

僅供民航局使用 (For CAA Only)				
檢定給證階段 CERTIFICATION PHASE				
預定完成日期	檢定給證階段之工作進度	完成日期	退回修改日期	核准日期

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Scheduled date of Completion	Events of Certification Phase	Accomplished Date	Data Returned for Changes	Approved Date
	I. 檢定報告 Certification Report			
	A. 申請前意圖陳述 Pre-application Statement of Intent			
	B. 正式申請函 Formal Application Letter			
	C. 工作進度表 Schedule of Events			
	D. 最後符合陳述 Final Compliance Statement			
	E. 檢定證書及營運規範影本 Photocopy of Certificate and Operation Specification			
	G. 檢定結果綜合說明及建議 Summary and Recommendation to Certification Process			
	H. 檢定報告歸檔 Certification Report Filing			

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