

PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA

NOMOR : KP463 TAHUN 2013

TENTANG
PETUNJUK PELAKSANAAN PERATURAN KESELAMATAN
PENERBANGAN SIPIL BAGIAN 8900-2.11 (*STAFF INSTRUCTION*) TENTANG
PROSEDUR SERTIFIKASI, PERPANJANGAN, PENAMBAHAN
UNTUK ORGANISASI PERAWATAN PESAWAT UDARA DALAM NEGERI
(*CERTIFICATION, RENEWAL, AND AMENDMENT FOR DOMESTIC AMO*)

DENGAN RAHMAT TUHAN YANG MAHA ESA

DIREKTUR JENDERAL PERHUBUNGAN UDARA,

- Menimbang : a. bahwa dalam Keputusan Menteri Perhubungan Nomor KM 17 tahun 2009 tentang Peraturan Keselamatan Penerbangan Sipil Bagian 145 Amandemen 3 (*Civil Aviation Safety Regulation Part 145 Amendment 3*) tentang Organisasi Perusahaan Perawatan Pesawat Udara (*Approved Maintenance Organization*) telah diatur mengenai Organisasi Perusahaan Perawatan Pesawat Udara;
- b. bahwa untuk melaksanakan hal sebagaimana dimaksud pada huruf a, perlu ditetapkan Petunjuk Pelaksanaan Peraturan Keselamatan Penerbangan Sipil Bagian 8900-2.11 tentang Prosedur Sertifikasi, Perpanjangan, Penambahan Untuk Organisasi Perawatan Pesawat Udara Dalam Negeri dengan Peraturan Direktur Jenderal Perhubungan Udara;
- Mengingat : 1. Undang-Undang Republik Indonesia Nomor 1 Tahun 2009 tentang Penerbangan (Lembaran Negara Republik Indonesia Tahun 2009 Nomor 1, Tambahan Lembaran Negara Republik Indonesia Nomor 4956);
2. Peraturan Pemerintah Nomor 3 Tahun 2001 tentang Keamanan dan Keselamatan Penerbangan (Lembaran Negara Republik Indonesia Tahun 2001 Nomor 9, Tambahan Lembaran Negara Republik Indonesia Nomor 4075);

3. Peraturan Presiden Nomor 47 Tahun 2009 tentang Kedudukan, Tugas, Fungsi, Kewenangan, Susunan Organisasi Dan Tata Kerja Kementerian Negara RI sebagaimana telah diubah dengan Peraturan Presiden Nomor 91 Tahun 2011;
4. Peraturan Presiden Nomor 24 Tahun 2010 tentang Kedudukan, Tugas, dan Fungsi Kementerian Negara serta Susunan Organisasi, Tugas, dan Fungsi Eselon I Kementerian Negara sebagaimana telah diubah dengan Peraturan Presiden Nomor 38 Tahun 2013;
5. Peraturan Menteri Perhubungan Nomor KM 17 Tahun 2009 tentang Peraturan Keselamatan Penerbangan Sipil Bagian 145 Amandemen 3 (*Civil Aviation Safety Regulations Part 145 Amendment 3*) tentang Organisasi Perusahaan Perawatan Pesawat Udara (*Approved Maintenance Organizations*);
6. Peraturan Menteri Perhubungan Nomor KM 60 Tahun 2010 tentang Organisasi dan Tata Kerja Kementerian Perhubungan;

MEMUTUSKAN :

Menetapkan : PETUNJUK PELAKSANAAN PERATURAN KESELAMATAN PENERBANGAN SIPIL BAGIAN 8900-2.11 (*STAFF INSTRUCTION*) TENTANG PROSEDUR SERTIFIKASI, PERPANJANGAN, PENAMBAHAN UNTUK ORGANISASI PERAWATAN PESAWAT UDARA DALAM NEGERI (*CERTIFICATION, RENEWAL, AND AMENDMENT FOR DOMESTIC AMO*).

Pasal 1

Petunjuk Pelaksanaan Peraturan Keselamatan Penerbangan Sipil Bagian 8900-2.11 tentang Prosedur Sertifikasi, Perpanjangan, Penambahan Untuk Organisasi Perawatan Pesawat Udara Dalam Negeri (*Certification, Renewal, and Amendment for Domestic AMO*), sebagaimana tercantum dalam Lampiran Peraturan ini.

Pasal 2

Direktur Kelaikan Udara dan Pengoperasian Pesawat Udara, mengawasi pelaksanaan peraturan ini.

Pasal 3

Peraturan ini mulai berlaku pada tanggal ditetapkan

Ditetapkan di : JAKARTA
pada tanggal : 17 Oktober 2013

DIREKTUR JENDERAL PERHUBUNGAN UDARA

ttd

HERRY BAKTI

SALINAN Peraturan ini disampaikan kepada :

1. Sekretaris Jenderal, Kementerian Perhubungan;
2. Inspektur Jenderal, Kementerian Perhubungan;
3. Sekretaris Direktorat Jenderal Perhubungan Udara;
4. Para Direktur di Lingkungan Ditjen Perhubungan Udara;

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ISRAFULHAYAT

Staff Instruction

SI 8900 - 2.11

**Certification or Renewal or Amendment of a
CASR Part 145 for Domestic Approved
Maintenance Organization (AMO)**

Amendment : 0

Date :

**DIRECTORATE GENERAL OF CIVIL AVIATION
JAKARTA – INDONESIA
AMENDMENT RECORD LIST**

Amendment No.	Issue Date	Inserted By	Insertion Date
Original issue	SKEP/...../.../2013/.../2013		

SUMMARY OF AMENDMENTS

Amendment No.	Source/s	Subject/s	Approved
Original			SKEP/.../.../2013 .../.../2013

FOREWORD

1. **PURPOSE** : This Staff Instruction prescribes responsibilities, policies, and procedures to be used by the Directorate General of Civil Aviation (DAAO) for evaluating an applicant for certification or renewal or amendment of CASR Part 145 Approved Maintenance Organization (AMO) located within Republic of Indonesia (Domestic AMO).
- This Staff Instruction may be made available to the public so that they may better understand the authority and responsibility of the DAAO.
2. **REFERENCES** : This Staff Instruction should be used in accordance with the applicable regulations.
3. **CANCELLATION** : SI 8300 Volume 2 Chapters 161 up to 166, Revision 4, dated 25 March 2010 is canceled
4. **AMENDMENT** : The amendment of this Staff Instruction shall be approved by the Director General of Civil Aviation.

DIRECTOR GENERAL OF CIVIL AVIATION

ttd

HERRY BAKTI

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KEPALA BAGIAN HUKUM DAN HUMAS
SETDITJEN HUBUD


ISRAFULHAYAT

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CHAPTER I. INTRODUCTION

1. PURPOSE

This chapter defines relevant definitions and terms for Civil Aviation Safety Regulations (CASR) part 145 Approved Maintenance Organization (AMO) located inside and outside the Republic of Indonesia. It also explains the policies; procedures and references applicable to an AMO.

2. DEFINITIONS

a. **AMO Certificate of Approval:** The authority granted by DAAO for an AMO to conduct business. The certificate states the following information:

- 1) AMO number;
- 2) What the AMO's ratings are to include; class ratings; limited ratings; limited specialized service ratings; the location and name of the AMO; and the expiration date.

b. **Accountable Manager.** The certificated AMO designates the accountable manager as responsible for, and having authority over all AMO operations conducted under CASR part 145. This person's duties include ensuring that AMO personnel follow the regulations and serving as the primary contact with the DAAO.

NOTE:

The DAAO's definition of an accountable manager may differ from the European Aviation Safety Agency's (EASA) definition of an accountable manager; however, one person may serve both positions.

c. **AMO Manual.** The manual describes the procedures and policies of an AMO's operations.

d. **Article.** An article is an aircraft, airframe, aircraft engine, propeller, appliance, or component part.

e. **Capability List.** A capability list (CL) is a list of articles on which the AMO is rated to perform maintenance, preventative maintenance, or alterations.

f. **Certificated AMO.** A certificated AMO is an AMO that has a fixed main base location, has met the certification requirements of CASR Part 145, and is engaged in the maintenance, preventive maintenance, inspection, and alteration of aircraft and aircraft products as defined in CASR Part 43. In addition, an AMO may have:

- 1) Additional fixed locations located close to and within the same geographic area as the main base,

- 2) Satellite facilities, and
 - 3) Line maintenance authorization.
- g. **Class Ratings.** Class ratings are issued if the AMO can prove its capability to maintain a representative number of products under this rating. After issuance of a class rating, it should not have restrictions to a specific product added. For such a case, issue a limited rating.
- h. **Contracting.** Contracting means entering into an agreement between two or more persons for the performance of maintenance functions on an article.
- i. **Correction.** A correction is an action to eliminate a detected nonconformity as it relates to the articles or the maintenance processes.
- j. **Corrective Action.** Corrective action is an action to eliminate the cause of a detected nonconformity or other undesirable condition to prevent its recurrence.
- k. **Correspondence Acceptable to the DAAO**—Documents, Manual or a Revision Submitted to the DAAO for Acceptance. The air agency may immediately initiate and use the submitted correspondence contents without formal DAAO acceptance. The DAAO considers a document, manual or revision acceptable. There is no requirement for the DAAO to acknowledge receipt of or initiate a formal letter of acceptance upon review of the submitted correspondence. Submission of this document may be as a written or electronic document.
- l. **Directly in Charge.** The person directly in charge is responsible for the work of a certificated AMO that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness.
- 1) A person directly in charge does not need to physically observe and direct each worker constantly, but must be available for consultation on matters requiring instruction or decision from a higher authority.
 - 2) A person designated as “directly in charge” of maintenance, preventive maintenance, or alterations must hold an appropriate license.
 - 3) The AMO is responsible for providing adequate personnel who can perform, supervise, and inspect the work for which the station is rated. Additionally, each AMO determines the abilities of its supervisors and ensures that there are enough supervisory personnel for all phases of its activities.
- m. **Domestic AMO.** A domestic AMO is an automated Operations Specifications term used to describe an DAAO-certificated facility within the Republic of Indonesia that performs maintenance, preventive maintenance, or alterations on article

- n. **Exemption.** Exemption is an authorization that permits an alternate means of compliance with a specific CASR. The exemption must meet the procedural requirements of CASR Part. 11.
- o. **Limited Ratings.** AMOs are issued limited ratings for the performance of maintenance on particular makes and models of airframes, powerplants, propellers, radios, instruments, accessories, and/or parts.
- p. **Limited Specialized Service Ratings.** Limited specialized service ratings are issued for a special maintenance function when the function is performed in accordance with a specification or data acceptable to the DAAO. The OpSpecs must include the specifications or data used by the AMO to perform that service in accordance with part 145, CASR Part 145.61(c).

NOTE:

- 1). The AMO may request a limited rating for specialized services utilizing a civil or military specification currently used by industry. The DAAO Inspector should carefully consider if this specification covers all areas required for the repair prior to approval.
 - 2). Will this repair, when completed, allow approval for return to service for the article? In some cases, the DAAO Inspector may need assistance from other sub directorates to determine if the specification is adequate for the rating requested.
 - 3). The DAAO Inspector is responsible for ensuring that the applicant can accomplish the work outlined in the specification. If the specification does not meet the requirements of CASR Part 43, CASR Part 43.13, then the DAAO Inspector should inform the applicant that the specification may be used as part of a process the applicant can develop under the provisions of CASR Part 145.61(c)(2).
 - 4). The DAAO Inspector must evaluate if the process is appropriate for the article. The PI should note the need for additional limitations, if any, in the limitation section of the OpSpecs.
 - 5). Many civil and military specifications currently used by industry are generic. The DAAO Inspector should verify the AMO has provisions in its manual for evaluation of the article to determine if anything would prohibit the specification utilization.
- q. **Line Maintenance.** Line maintenance is unscheduled maintenance resulting from unforeseen events, or scheduled checks that contain servicing and/or inspections that do not require specialized training, equipment, or facilities.

Line maintenance is not a rating but an authorization to provide a service to an air carrier certificated under part 121 or part 135, or a foreign air carrier or foreign person operating an Indonesian registered aircraft in

common carriage under CASR Part 129 on any aircraft of that air carrier or person.

- 1) An AMO certificated to provide maintenance on the complete aircraft or engine under a class or limited rating will have the line maintenance authorization listed on OpSpec, if located at a site other than the main base.
- 2) If the AMO has line maintenance authorization, then the AMO main base must have certification on the complete airframe or engine. OpSpec would list the Manufacturer (e.g., Boeing), Make/Model (e.g., B737), or engine, and under the additional limitations,
- 3) An AMO with a line maintenance authorization cannot provide work away from station from the line maintenance location(s). The DAAO gives line maintenance authorization to the AMO to provide line maintenance for a specific air carrier, at a specific location, for a specific job. It is not a blanket approval. By granting this approval, the DAAO certifies that the AMO is capable of performing that specific maintenance. This is an authorization granted to the AMO; therefore, all regulations governing the AMO will apply except for housing. CASR Part 145.205(c) provides relief for housing.

r. **Maintenance.** Maintenance is the inspection, overhaul, repair, preservations, and the replacement of parts, but excludes preventive maintenance.

s. **Maintenance Function.** A maintenance function is a step or series of steps in the process of performing maintenance, preventive maintenance, or alterations, which may result in approving an article for return to service.

Only persons authorized under CASR Part 145.157(a) and 145.213(d) may approve an article for return to service, perform a final inspection, or sign a maintenance release.

t. **Operations Specifications (OpSpecs).** The DAAO issues OpSpecs to indicate the authorizations and limitations to ratings as specified on the Air Agency Certificate.

u. **Quality Control Manual (QCM).** The QCM describes the inspection and quality control system and procedures used by the AMO.

v. **Satellite AMO.** A satellite AMO is an additional certificated facility or location under the managerial control of another certificated AMO.

- 1) The main base must have procedures in the AMO manual that covers the management structure, facility layout of the satellite, and a procedure on how the AMO will assure the satellite is following the main base quality system.

- 2) If a satellite is a stand-alone facility meeting the requirements of part 145, the satellite may use the AMO manual and quality system of the main base AMO. If the satellite elects to use the main base AMO manual and quality system, then the satellite manual and quality system must define any differences between the two locations. The certifying DAAO Inspector for the satellite AMO must review the differences of the satellite to assure the satellite AMO meets the requirement of the regulation. The DAAO Inspector must also develop a surveillance program that encompasses all facilities of the AMO.
- w. **Supervisor.** Supervisors must oversee the work performed by any individuals who are unfamiliar with the methods, techniques, practices, aids, equipment, and tools used to perform the maintenance, preventive maintenance, or alterations. Each supervisor must, if employed by an AMO located inside the Republic of Indonesia, hold a certificate issued under part 65.
- 1) The preamble to part 145 (see CASR Part 145.153) indicates a difference between a “supervisor” and a “person directly in charge.” A supervisor physically observes and directs a worker when needed. A person directly in charge does not need to physically observe and direct each worker constantly but must be available for consultation on matters requiring instruction or a decision from a higher authority.

NOTE:

This does not preclude the AMO from assigning one supervisor to multiple shops or areas provided the supervisor is properly certificated and qualified. The supervisor’s workload should allow adequate time to oversee the work.

- 2) Part 145 does not dictate the ratio of supervisors to individuals under supervision. The AMO establishes this ratio. However, CASR Part 145.153 states in part that a certificated AMO must ensure it has a sufficient number of supervisors to direct the work performed under the AMO’s certificate and OpSpecs.
- 3) Part 43 identifies persons authorized to perform maintenance, preventative maintenance, rebuilding, and alterations. Section 43.3(c) states in part that a person working under the supervision of a certificate holder may perform the maintenance, preventive maintenance, and alterations that the supervisor is authorized to perform, if:
 - a) The supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly, and
 - b) The supervisor is readily available, in person, for consultation.

NOTE:

The definition of “in person” is “in one’s bodily presence.” An example of this is “applicants are requested to apply in person.”

3. CAPABILITY LIST (CL).

A certificated AMO with a limited rating may perform maintenance, preventive maintenance, or alterations on an article if listed on a current CL acceptable to the DAAO on the AMO’s OpSpecs.

- a. If the AMO chooses to use a CL, the AMO manual must:
 - 1) Contain procedures for revising the list and notifying the DAAO.
 - 2) Include how often the DAAO will be notified of revision,
 - 3) Contain procedures for the self-evaluation required under CASR Part 145.215(c) for revising the CL,
 - 4) Describe the methods and frequency of such evaluations, and
 - 5) Contain procedures for reporting the results to the appropriate manager for review and action.
- b. The CL itself may be a separate document or part of the AMO manual; however, the manual must contain the procedures for revising the list and for performing the self-evaluation.
- c. If the AMO elects to maintain a separate CL, it must perform a self-evaluation before adding an article to the CL.

The individual(s) performing the self-evaluation should be familiar with the AMO processes and be able to perform an audit to determine compliance with part 145. The self-evaluation procedures in the AMO manual should ensure that the AMO has:

- 1) The appropriate limited rating;
 - 2) Adequate housing and facilities;
 - 3) The recommended tools, equipment, and materials;
 - 4) Current technical data and processes; and
 - 5) Sufficient qualified personnel.
- d. The AMO must report the results of the self-evaluation to the appropriate AMO manager for review. If the self-evaluation was satisfactory, the CL may undergo revision. The AMO can submit the revised list and any other

necessary technical data with a transmittal document to the Inspector at the DAAO.

NOTE:

Transmittal documents include cover letters, memos, e-mails, faxes, or any other media acceptable to the DAAO.

- e. If the capabilities are maintained on the OpSpecs, each article will be listed by make, model, or manufacturer's name under each limited rating. If the AMO maintains a separate CL, the OpSpecs will indicate that the certificate holder has the authorization to use a CL as revised.
- f. An AMO that chooses to use a CL must maintain a current CL acceptable to the DAAO, identifying each article by make and model or other nomenclature designated by the manufacturer.

A CL should not use the term "all" to denote the make or model. "Series" may describe the model, provided the term does not denote a broad classification that is not well-defined.

For example, "Cessna 150 series aircraft" may be an appropriate entry; whereas "Cessna 100 series aircraft" is a broad classification which includes many substantially different models.

- g. If the AMO does not maintain or have the necessary tools, equipment, housing, facilities, and trained personnel to perform the required maintenance on the article(s) listed on the CL, delete the article(s) from the CL.

NOTE:

The AMO must maintain, or have written evidence that it can obtain the tools and equipment required to maintain the articles on the CL.

4. ADDITIONAL FIXED LOCATIONS.

An AMO may have additional fixed locations (facilities) without certifying each facility as a stand-alone or satellite AMO. The DAAO may grant this authorization if all of the facilities are localized and within a defined area, such as several buildings or hangars, which may be on or near the same airport or at or near the address stated on the AMO certificate.

- a. Additional locations are not separate facilities and must collectively be considered one AMO. However, the AMO must have procedures in its manual to describe how it will operate in this manner and remain compliant with its manual and the requirements of part 145. The DAAO does not consider this situation work away from the station. The OpSpecs must list each fixed location.

NOTE:

The DAAO inspectors and AMO accountable manager must collaborate when making a determination that AMO operations require additional locations. The DAAO's primary concern is that all the facilities are localized and within a defined area of operation.

The AMO must assure that DAAO inspectors has a reasonable access to all locations, without the inconvenience of extended travel distances. Extended travel between facilities may have an adverse impact on DAAO oversight and surveillance capabilities. Surveillance for the certificated AMO must include all facilities.

- b. Additional locations may be particularly useful when local ordinances require a AMO to use remote sites when performing some maintenance actions, such as functional testing of turbine engines.

Local laws and noise abatement programs may force a AMO to another work site. The DAAO may find that the additional locations do not have a significant impact on the maintenance performed, provided the manual has sufficient procedures to ensure the airworthiness of articles being maintained.

- c. The primary facility must have full control over all additional locations. It is not necessary that each location be completely equipped since tools, equipment, parts, etc., can be transported between facilities.
- d. The AMO must apply and be approved for the use of additional locations before exercising the privileges of its certificate and ratings at these facilities. The application must list each facility and its physical address. The AMO must submit a revision to its manuals detailing the procedures it will follow when transporting equipment or parts, how it will ensure adequate and appropriate personnel are available at each site when needed, and how it will continue to meet the requirements of part 145.

5. MAINTENANCE FUNCTIONS AND CONTRACT MAINTENANCE

- a. **Maintenance Functions:** The DAAO must approve maintenance functions before a certificated AMO contracts out the performance of maintenance, preventative maintenance, or alterations of an article. Maintenance functions requiring approval are those items for which an AMO is rated to maintain, but chooses to contract out that maintenance, as referenced in part 145, CASR Part 145.201(a) to any maintenance provider.
- b. **Contract Maintenance:** An AMO must have the material and equipment necessary to perform the functions appropriate to its rating. However, it does not need to have the tools and equipment for functions it has authorization to contract out according to its DAAO-approved list of maintenance functions. The AMO must request and obtain approval

before it can contract out a maintenance function. If the DAAO approves the contracted maintenance function, the AMO can determine who will perform the maintenance.

NOTE:

- 1). An AMO may contract maintenance functions to both DAAO-certificated and non-DAAO-certificated facilities. The DAAO must approve all maintenance functions for both certificated and noncertificated providers. Only those functions that are within the scope of the AMOs ratings may receive approval.
- 2). If an AMO contracts out a maintenance function to another DAAO-certificated AMO, the originating AMO must determine that the contracted AMO has the proper rating to perform the maintenance. The AMO doing the maintenance is responsible for providing the approval for return to service of maintenance performed on each article. The AMO must properly process articles received from a certificated facility through its own receiving inspection procedures before performing further maintenance.

6. MAINTENANCE PERFORMED AT ANOTHER LOCATION.

An AMO may perform work away from its fixed location for a one-time special circumstance or on a recurring basis. Part 145, CASR Part 145.203(a) states that the DAAO determines these special circumstances.

- a. An AMO may perform maintenance away from its fixed location for special circumstance, such as an aircraft on the ground or in preparation for a ferry flight.
 - 1) If the AMO does not include a procedure in its manual for work away from station for emergency repairs, then it must submit each request to the DAAO Inspector for evaluation on a case-by-case basis. The DAAO Inspector will make a determination and inform the AMO of any parameters that it must follow to perform the requested maintenance. The AMO may elect to put a procedure in its manual to cover special circumstances for emergency repair (aircraft on ground, preparation for special flight permit, etc.).
 - 2) The Directorate of Airworthiness and Aircraft Operations (DAAO) will review the manual procedure to verify it contains information on how the AMO will notify the DAAO Inspector when it must perform work away from station. The DAAO Inspector must verify this procedure is for emergency purposes only and not on a recurring basis or extended work away from station.
- b. An AMO may perform maintenance away from its fixed location for extended periods of time if it meets certain criteria. Section 145.203(a) states that the DAAO determines these special circumstances. Additionally, this type of operation does not constitute the establishment of

another AMO or a satellite AMO because it is temporary in nature. After completion of the contracted maintenance, the AMO must transport its tools, equipment, and personnel back to its fixed location.

The AMO must submit this request to the DAAO Inspector for evaluation on a case-by-case basis. The DAAO Inspector will keep a copy of the request, the AMO's procedure, and the DAAO Inspector's approval document in the AMO file. The AMO must meet the following criteria to provide maintenance away from its fixed location for extended periods of time:

- 1) Extended contracted work away from station must not exceed one year.
 - 2) The AMO must furnish its own tools and equipment unless it has procedures for leasing or contracting tools and equipment that comply with the regulations and the procedures in the AMO Manual.
 - 3) The AMO must ensure its personnel understand that they must follow AMO procedures when performing maintenance away from station.
 - 4) The AMO must have all required data to complete the contracted maintenance at the location.
 - 5) The request to the DAAO must include the aircraft (make/model/series), the project to accomplish, the duration of the maintenance, the location of the maintenance, and a statement that the temporary facilities are suitable for the AMO's maintenance.
 - 6) Housing that is suitable for one AMO's use may not automatically be suitable for the purposes and scope of maintenance for another AMO's ratings, privileges, or limitations. The AMO requesting to provide maintenance away from its fixed location for extended periods of time must evaluate the housing and facilities where the maintenance will take place to ensure the location meets the requirements of the rule.
- c. As stated in CASR Part 145.203(b), an AMO may perform maintenance away from its fixed location on a recurring basis when necessary, such as to perform mobile field services. This will allow maintenance away from the AMO's fixed location as a part of everyday business rather than under special circumstances only.
- 1) If the AMO intends to perform maintenance on a recurring basis at places other than its fixed location, the manual must include procedures for accomplishing the maintenance, preventive maintenance, alterations, or specialized services.
 - 2) The procedures must address issues related to transportation, tools, equipment, personnel, technical data, and records. These procedures should ensure the AMO at the remote location remains in compliance

with part 145 and its manual, just as if it performed the maintenance at the AMO's fixed location.

- 3) Should the AMO elect to use mobile repair units, the AMO Manual must have clear procedures on:
 - a) How it will control the work away from station and will be clear in that the mobile units will bring no work into them;
 - b) Identifying where the DAAO Inspector may find each unit, should the DAAO Inspector need to provide surveillance on them and spot check the work they perform;
 - c) Providing a contact person for each unit, along with contact information (telephone/e-mail);
 - d) How it will control all calibrated equipment and technical data in each unit;
 - e) How often the AMO will audit each unit and make the findings available to the DAAO Inspector. The AMO should provide the DAAO Inspector with a schedule of audits so the DAAO Inspector may accompany an audit as part of the surveillance program; and
 - f) Any other requirement the DAAO Inspector deems necessary for the type of operation requested.

7. TAKING CORRECTIVE ACTIONS ON DEFICIENCIES.

Part 145, CASR Part 145.211(c)(1)(ix) states that the QCM must include procedures used for taking corrective action on deficiencies. A corrective action is an action to remedy an undesirable situation. The correction of deficiencies is normally an integral part of an AMO's improvement process, and could include revisions to procedures that were not working properly.

- a. Corrective action requires that a fact-based investigation determine the root cause or causes in order to eliminate them. Corrective action is applicable in two situations: before the article receives approval for return to service, and after the article has received approval for return to service.
- b. Upon detection of a deficiency before the article receives approval for return to service, the AMO should follow its procedures describing how to accomplish the corrective work. Upon detection of a deficiency after the article has received approval for return to service, the AMO should follow its procedures to notify the DAAO and the owner/operator of any potential problems and recall any unairworthy article. The objective of the investigation into the cause of the deficiency, and the corrective actions taken, is to prevent a recurrence of the same or similar problems.
- c. The procedures in the QCM should include a system for documenting any deficiencies and the corrective actions taken to prevent a recurrence. The

system should provide the ability to track any open corrective action requests and the date the corrective action is due. The program should also include audits of the corrective action(s) taken to ensure effectiveness. The program should also track these audits to ensure their completion in a timely fashion.

8. REGULATORY REFERENCES

- a. CASR Parts 43, 45, 65, 121, 135 and 145
- b. Advisory Circular 145-9, Guide for Developing and Evaluating AMO Maintenance Procedures Manuals and Quality Control Manual, as amended
- c. Staff Instruction (SI) 8900-6.9 – Inspection of a CASR Part 145 Approved Maintenance Organization (AMO)

CHAPTER II – GENERAL PROCEDURES

1. CAPABILITY LIST (CL) VERIFICATION.

- a. Review the CL to ensure the AMO has ratings for the articles identified on the list.
- b. Review the AMO Manual for:
 - 1). The revision process, including DAAO notification;
 - 2). Where and how the list will be maintained;
 - 3). Frequency and method of revising the list; and
 - 4). Reporting self-evaluation results to the appropriate manager.
 - 5). Review the self-evaluation process for:
 - a) Records of training of persons performing the self-evaluations;
 - b) Performance of the self-evaluation before modifying the CL; and
 - c) Adequate identification of the tools, equipment, materials, technical data, adequate housing and facilities, and qualified personnel that are available before modifying the CL.
- c. **Accept the CL.** If the submission or revision is acceptable, DAAO Inspector's will:
 - 1). If a paper revision, remove the affected pages and insert the revised pages in the CL or replace the list in its entirety, if that is the method the AMO uses, and file the transmittal documents in the appropriate office file.
 - 2). If in electronic format, replace the outdated disk or file with the current CL or revised pages in the certificate holder's office file.
- d. **Reject the CL.** If the submission or revision is not acceptable, the DAAO Inspector's will:
 - 1) Initiate a transmittal document indicating the date, document, and revision number of the rejected CL or revision.
 - 2) Return all copies to the applicant with an explanation of discrepancies requiring correction and instructions for resubmitting the documents.

2. REVIEW ADDITIONAL FIXED LOCATIONS.

- a. **Submit Application.** An AMO may request the addition of additional fixed locations to its OpSpecs by submitting the request on DAAO Form 145-1, Application for Organizational Approval.

The AMO must:

- 1) List the physical address of all additional fixed locations for addition to its OpSpecs.
- 2) Submit AMO and QCM revisions, to include how it will continue to meet the requirements of part 145 and its manual at each additional location.
- 3) Supply any additional information needed by the DAAO to consider the request. DAAO Inspector must approve the additional locations before the AMO exercises the privileges of its certificate at the additional facility.

- b. **Review Application.** The DAAO Inspector receives the application, manual revisions, and any other information necessary to determine the appropriateness of the request. The inspector must:

- 1) Review the manual revisions that detail how the AMO will perform maintenance at the additional location.
- 2) Review any other material or information submitted to assist the inspector in completing his or her review.
- 3) Inspect the additional location to ensure that:
 - a) It is within the local commuting area and does not pose an inconvenience to the inspector for traveling to all locations,
 - b) Accomplishment of the work is appropriate under the AMO's certificate and ratings as listed on the OpSpecs, and It is under the full control of the AMO.

- c. **Approve Additional Fixed Location.** The DAAO approves the additional fixed location address by adding it to the AMO's OpSpecs.

3. MAINTENANCE FUNCTIONS AND CONTRACT MAINTENANCE

- a. **Maintenance Functions.** An AMO can submit its maintenance functions in any manner acceptable to the DAAO, but cannot contract maintenance functions to non-certificated sources until they have received approval.

AMO Manuals must contain a procedure that describes how the AMO will submit its maintenance functions to the DAAO. The AMO Manual must

also describe how the AMO will revise the list of maintenance functions. Maintenance functions, if the AMO contracts them to a noncertificated provider, must receive approval. The AMO rating must cover each approved function.

- 1) AMOs will submit the list of maintenance functions for approval to the DAAO with a transmittal document that describes the submitted document and shows the date and/or revision number of the document. The AMO may also wish to provide a method for adding a maintenance function to its DAAO-approved list on an emergency basis. DAAO Inspectors should ensure that the procedure accepted in the AMO Manual regarding these emergency procedures sufficiently addresses how to add the maintenance function, and how to obtain DAAO approval in a short period of time.
- 2) DAAO will approve or reject the maintenance function list by:
 - a).Initiating a (formal letter) transmittal document identifying the document, date, revision number, and stating either approval or rejection of the function.
 - b).Filing a copy of the transmittal in the AMO folder and providing a copy to the certificated AMO by mail or electronic media.
- 3) To assist AMO in determining which functions to allow, DAAO Inspector should provide a reason for rejecting the maintenance functions. Some reasons for rejecting maintenance functions include:
 - a) Too much contracting out of “core business,” leaving the AMO to provide little, if any, actual maintenance on the articles for which it holds ratings to work on;
 - b) Continually using contracting out as a means to keep staffing below adequate levels for the work the AMO is obligated to accomplish; and
 - c) Contracting out a maintenance function without prior approval.

NOTE:

An AMO should not use contracting out maintenance functions to replace the need for adequately staffed and trained maintenance personnel. DAAO Inspector should be cautious of AMO that constantly revise the maintenance function list on an emergency basis in order to complete work in a timely manner. DAAO Inspector should ensure that an AMO has the necessary trained personnel for the scope and complexity of the ratings it holds.

- b. **Contract Maintenance.** AMO that do not intend to contract out maintenance functions must have the housing, facilities, material, and

equipment necessary to perform the functions appropriate to its ratings. The tools, equipment, and technical data must be available at the time the AMO performs the work. AMO wishing to contract maintenance functions out to non-certificated providers must submit a list of those maintenance functions to the DAAO for approval.

NOTE:

An AMO with a limited rating for specialized services may not contract out any function required in the process specification listed in the OpSpec.

The AMO must make available a list that includes the maintenance functions, the name of the contractor that will perform the function(s), and the contractor's physical address.

To approve or reject a list of contracted maintenance functions, the DAAO must determine:

- a) That the AMO Manual has adequate procedures that dictate how the maintenance functions will be submitted and revised,
- b) How the AMO will qualify and/or inspect noncertificated contractors, and
- c) How the AMO will apply approval for return to service once an article returns from a contractor's facility.

A certificated AMO may not provide only approval for return to service of a type-certificated (TC) article following maintenance, preventive maintenance, or alterations.

NOTE:

A certificated AMO may not contract out to a non-certificated person unless it provides in its contract that the DAAO may conduct inspections or observe maintenance functions performed for the AMO. If a noncertificated person refuses to allow the DAAO access, the certificated AMO cannot approve the articles for return to service.

4. MAINTENANCE PERFORMED AT ANOTHER LOCATION.

Approved Maintenance Organization (AMO) may:

- elect not to perform maintenance away from the main base station;
- need to perform maintenance away from station for special circumstances;
- need to perform maintenance on a recurring basis away from station.

The DAAO Inspector should consider the need of the AMO carefully.

- a. **No Maintenance Away From Main Base Station.** Should the AMO determine it never has a need to perform maintenance away from the main base station, it would not need the requirements for a procedure in its manual and OpSpec. However, the DAAO Inspector should inform the AMO that if a need arises, the AMO must notify the DAAO and wait for a determination from the DAAO Inspector.
- b. **Emergency Maintenance Away From Main Base Station.** If the AMO determines it needs to perform maintenance away from the main base station on an emergency basis, it may put a procedure in its AMO manual for the types of emergency maintenance that it may need to perform, stating how it will control the work, material, equipment, personnel, data inspection procedure, etc., and stating how it will notify the DAAO Inspector.
 - 1) If the DAAO Inspector determines these procedures meet the requirements of CASR Part 145.203(a), the AMO would not have to wait for a reply from the DAAO Inspector before performing the work.
 - 2) The DAAO Inspector will send the AMO a letter stating that the procedure meets the requirements of CASR Part 145.203(a). The (DAAO) will keep a copy of the letter in the AMO file.
- c. **Extended Maintenance Away From Main Base Station.** If the AMO should have a special circumstance, such as a need to perform maintenance for an extended period of time, then it must present this request to the DAAO Inspector for determination. (OpSpec is not required.) The AMO must present to the DAAO Inspector a plan, for review, on how the AMO will control the maintenance. The DAAO Inspector will verify the following:
 - 1) That the AMO request clearly states the time required to complete the project. If it needs additional time, the AMO must apply for an extension. Granting of the extension should only be for the time necessary for completion.
 - 2) That the AMO furnishes its own tools and equipment, unless it has procedures for leasing or contracting tools and equipment that comply with the regulations and with the procedures in the AMO Manual.
 - 3) How the AMO will assure that its personnel understand that they must follow the AMO procedures when performing maintenance away from station.
 - 4) How the AMO will have all required data to complete the contracted maintenance at the location.

- 5) That the request to the DAAO includes the aircraft (make/model/series), the project to accomplish, the duration of the maintenance, the location of the maintenance, and a statement that the temporary facilities are suitable.
 - 6) That the AMO can perform the work requested. The DAAO will send the AMO a letter stating the procedure meets the requirements of CASR Part 145.203(a). The DAAO will keep a copy of the letter in the AMO file.
- d. **Recurring Maintenance Away From Main Base Station.** If the AMO is performing maintenance away from the main base station on a recurring basis (part of everyday business rather than under special circumstances) there must be a procedure in the manual on how the AMO controls the work away from station. This type of work could include fuel cell repair, nondestructive testing, etc. where most, if not all, of the work is completed away from the base station. (OpSpec is required.)

5. AIRFRAME RATINGS AND CLASSIFICATIONS.

Section 145.59 defines ratings. Adding or removing an aircraft, engine, or component to a rating is an amendment to the rating, not an added rating. The addition or removal of an aircraft, engine, or component is a change to the limitations under the rating.

a. Airframe Maintenance or Alteration.

- 1) AMOs require an appropriate airframe rating when performing maintenance or alterations on articles (see Table II-1 Airframe Ratings and Classifications) such as:
 - a) Seats,
 - b) Seat belts,
 - c) Berths,
 - d) Galleys,
 - e) Lavatories,
 - f) Cabinetry,
 - g) Cabin/cockpit interior foam and fabric upholstered parts,
 - h) Dividers,
 - i) Curtains,
 - j) Windows, and
 - k) Any other interior structure.
- 2) Additionally, AMO require an appropriate airframe rating when performing maintenance or alterations on external aircraft structures or fuselage articles such as:

- a) Aircraft composite components,
 - b) Aircraft painting,
 - c) Electrical wiring harnesses,
 - d) Landing gear removal and installation,
 - e) Doors and the attaching components,
 - f) Fuselage repairs or alterations, or
 - g) Flight controls and attaching hardware.
- 3) Similarly, articles of all-cargo configured aircraft are considered part of the airframe and require an appropriate airframe rating. These include:
- a) Unit loading devices,
 - b) Cargo pallets or containers,
 - c) Bulkheads,
 - d) Ball mats,
 - e) Floor roller tracks, and
 - f) Floor or side locks.
- 4) Performing maintenance or alterations on articles associated with an emergency medical support installation, such as stretchers, litters, and supporting hardware or structures also require an appropriate airframe rating.
- 5) AMO performing a similar maintenance function, but using different processes, could conceivably hold different limited ratings. See Table II-6 - Authorized AMO Ratings for CASR Part 91.411 and 91.413 Testing

b. Ratings.

- 1) A revised or amended rating is not an added rating. If the AMO desires to add an additional aircraft under the present rating, it will be a change or an amendment to the rating and will not require a reissue of the certificate. If the AMO uses a Capability List (CL) as authorized by CASR Part 145.215, then the DAAO will receive a copy of the change, and the OpSpecs will not need changing.

If the AMO does not use the provisions of CASR Part 145.215 (Capability List), then an amendment to the rating will require submission of DAAO Form 145-1 and changing of the OpSpecs to add the aircraft. Whenever there is a change to the rating in the OpSpecs, the AMO must submit a new DAAO Form 145-1.

For example:

- a) An AMO currently holds a Limited Airframe rating, limited to Cessna 150 series aircraft. They would like to add Piper PA-28 series aircraft. The AMO does not use a CL.
 - i. The AMO submits DAAO Form 145-1 to the DAAO with the request to add the Piper aircraft.
 - ii. The DAAO Inspector verifies that the AMO meets all of the applicable requirements and then adds the Piper PA-28 series aircraft to the OpSpecs. The Approval Certificate would not change.
- b) An AMO currently holds a Limited Airframe rating and would like to add a Limited Powerplant rating.
 - i. The AMO submits Form DAAO 145-1 to the DAAO with the request to add the Limited Powerplant rating.
 - ii. After the DAAO Inspector verifies that the AMO meets all of the applicable requirements, the certificate will receive a change to add the limited powerplant rating and the OpSpecs will receive an amendment to add limited powerplant.

c. Limited Ratings.

- 1) Limited ratings listed in CASR Part 145.61 have long been interpreted as being limited to all the functions on a particular make and model of aircraft, powerplant, or propeller. Although this interpretation was appropriate in the 1950s, during the development of the current rating system, the repair and maintenance industry has developed numerous “niche” businesses that are limited to not only a particular article make or model, but also to certain maintenance functions on a particular make or model.
- 2) The current OpSpecs allow the proper identification of the limitation of make and models, as well as maintenance functions in the “Limitations” section. Limitations must not be vague and undefined. It is important that the AMO clearly understand its privileges and any associated limitations.

When issuing a limited rating, the DAAO Inspector must adequately describe the scope of the rating and any associated limitations in a clearly understood manner. Vague or misunderstood OpSpecs could lead to operations outside the intended scope of the certificate.

When necessary, use of the limitations column may further limit the intended scope of the rating. If additional limitations are not necessary

to adequately describe the intended scope, the DAAO Inspector should enter "None." The DAAO Inspector should use good judgment and carefully consider possible unintended consequences of not specifying limitations.

If painting, for instance, is the only maintenance function an AMO intends to perform, the limitation should read, "Limited to painting airframe structure and components on Boeing 737 series aircraft," or similar language.

If the AMO's limitation is performing maintenance on only a certain part of the airframe, that language should specify the manufacturer, make, and model of the component, and describe exactly what the AMO is limited to do.

NOTE:

Painting of aircraft may also involve other maintenance functions such as balancing of flight controls. The AMO should have the ability or be authorized to contract out those functions.

- 3) OpSpecs should identify the manufacturer and the make/model. In certain rare occasions, the term "all" (or series) may be appropriate when identifying the make/model.

When using "all" (or series) to denote the make/model, the DAAO Inspector must use good judgment and carefully consider potential unintended consequences. If the inspector is not careful, use of the word "all" (or series) could inadvertently authorize work beyond the desired intent.

For example, use of the word "all" (or series) may seem appropriate to authorize structural repairs on all models of aircraft manufactured by Mooney. However, unless the DAAO Inspector excludes several early production models, this authorization may inadvertently allow structural repairs on both wood and metal primary structures.

NOTE:

- a) DAAO Inspectors must ensure that the limitations of AMO adequately address the capabilities of the AMO both by the make and model of the aircraft, powerplant, propeller, or component part of those articles, and by the maintenance capabilities for which it has the tools, equipment, housing, data, and trained personnel to maintain. At no time should an AMO receive a rating if it does not have the required supporting components (tools, equipment, etc.) to perform the maintenance required of the rating.
- b) Limited ratings may incorporate a CL if the AMO has elected to employ one. For example, an AMO without a CL might receive a

limited airframe rating for the performance of transponder testing on a specific make/model aircraft, in accordance with part 43 appendix F. An AMO that employs a CL when the transponder make/model and aircraft make/model are listed on the CL (the holder of a limited radio rating would not have removal/reinstallation privileges) could receive a limited airframe or a limited radio rating for the performance of transponder testing.

4) An AMO may apply for and receive an AMO certificate and rating for a limited airframe for line maintenance.

a) The performance of inspections and minor flight line repairs to air carrier aircraft needs the limited airframe. The OpSpecs should list all the aircraft, the airlines which contracted the AMO to perform line maintenance, and the locations where line maintenance is to take place.

NOTE: An AMO must not perform line maintenance on articles that are outside the scope of its AMO certificate and ratings. Additionally, an AMO that has certification to perform line maintenance must not operate at a location that its OpSpecs do not list.

b) AMO certificated to perform only line maintenance must meet all of the eligibility requirements of the rule, including the requirement for suitable housing. The housing need not be on the airport grounds, but must adequately support the maintenance that the AMO is authorized to accomplish. However, the housing should adequately hold the AMO's tools, equipment, technical data, and any owner's/operator's spare parts for installation in aircraft.

NOTE: All certificated AMO must have suitable housing and facilities. Although CASR Part 145.205(c) allows some deviation from the housing requirement, that requirement is based on the AMO having suitable housing at another location that meets the requirements of part 145. If line maintenance is the only maintenance an AMO has certification to perform, the AMO must still meet the housing and all other requirements of part 145.

d. Line Maintenance Authorization.

1). An AMO may apply for and, if it meets the eligibility requirements for the rule, receive a line maintenance authorization within the scope of their airframe or powerplant rating. An AMO must have an airframe or engine class rating, or a limited airframe or engine rating for the complete aircraft or engine make and model (Boeing B737 or P&W JT8D) to perform inspections and minor flight line repairs to aircraft listed on its OpSpecs.

- 2). The AMO must have a rating for the aircraft or engine on their OpSpec and may only have authorization for line maintenance for those makes and models listed. The line maintenance authorization allows the AMO to inspect powerplants installed on aircraft and to install powerplants, but does not authorize maintenance that exceeds the scope of its ratings.
- 3). OpSpec should list all aircraft makes and/or models, the operators which contracted the AMO to perform line maintenance, and the location(s) where the line maintenance is to take place.

NOTE: An AMO must not perform line maintenance on articles that are outside the capabilities of its ratings or the limitations listed in its OpSpecs. Additionally, a AMO certificated to perform line maintenance can only do so at the main base or those locations listed on OpSpec.

- a) Inspectors should not rely solely on manual procedures to detail an AMO's privileges and limitations. The appropriate sections of the AMO's OpSpecs should include privileges and limitations detailed enough to identify the capabilities of the certificate holder.
 - b) Inspectors should review the maintenance or inspection cards to ensure the requirements that the AMO must meet are within the scope and definition of line maintenance. For example, some AMO have submitted requests to perform "B" checks for air carriers under a line maintenance authorization. Some "B" checks are more complex than others and could result in exposure of critical areas of the airframe to the environment or other contamination if the AMO has no housing or facilities available at the location. Performance of these inspections must be in an enclosed environment to avoid introducing collateral damage into the aircraft, airframe, powerplant, or components.
- 4). AMO certificated to perform line maintenance must meet all of the eligibility requirements of the rule, including the requirement for suitable housing. The housing need not be on the airport, but must adequately support the maintenance that the AMO has authorization to perform.
 - a) The AMO's housing should provide adequate storage for the AMO's tools, equipment, technical data, and any owner/operator spare parts or components for installation on aircraft.
 - b) AMOs performing line maintenance do not need a hangar. Housing facilities located near the airport are acceptable, provided they meet the requirements of CASR Part 145.103.

NOTE: All certificated AMO must have suitable permanent housing and facilities. Although CASR Part 145.205(c) allows some

deviation from the housing requirement, the basis of that requirement is upon the AMO having suitable housing at another location that meets the requirements of part 145. The AMO must still meet the housing and all other applicable requirements of part 145. Housing need not be on the airport where the line maintenance takes place, but the AMO's OpSpecs must list the street address.

- c) The granting of line maintenance authorization is only to maintain the aircraft of Indonesian air carriers certificated under part 121/135 or a foreign air carrier or a foreign person operating an Indonesian registered aircraft in common carriage under part 129. An AMO cannot receive line maintenance authorization to provide maintenance on foreign air carriers that do not have Indonesian registered aircraft. The OpSpec cannot list foreign air carriers and persons operating under part 129 that do not have Indonesian registered aircraft.
- 5) AMO must maintain the tools and equipment needed to perform line maintenance. AMO may lease seldom-used or unique tools as specified in CASR Part 145.51(b) and not maintain them if the AMO has a signed contract from the owner of the tool or equipment. As with all AMOs, the required tools and equipment must either be on the premises and in use during the performance of the work, or the AMO must have a contract that stipulates that the recommended tools are available.
- 6) Authorizing an AMO to perform line maintenance will follow, as appropriate, the same certification procedures found in Chapter III and Chapter IV of this SI.
- 7) AMO that may desire to perform line maintenance at more than one location must apply for, and provide the airport and operator information for each. This is limited to AMO with authorization to provide maintenance on the complete aircraft.
- 8) The AMO's OpSpec will list locations where the AMO performs line maintenance.
- 9) OpSpec authorizes a part 145 AMO to perform line maintenance functions that apply only to the certificate holders conducting operations under parts 121 and 135, and for foreign air carriers or foreign persons operating an Indonesian registered aircraft in common carriage under part 129.
 - a) The addition to the OpSpecs of authorization of line maintenance can only be for AMO that provide line maintenance for air carriers as defined in the regulation. General aviation operators do not have authorization for line maintenance.

- b) The authorization for providing line maintenance through the issuance of OpSpec is not a rating.
- c) The OpSpec authorization is a limitation to a rating, and as such, the limitation section must clearly state the types of aircraft the AMO has authorization to maintain and the location of the line station.
- d) The DAAO Inspector must review the scope of work the AMO will provide for each air carrier, which becomes the limitation added to OpSpec. AMOs cannot receive a blanket authorization. The DAAO Inspector must complete the review as required for each location and determine if the AMO can complete the requested maintenance for the air carrier at each location.
- e) AMO not limited to line maintenance should not receive OpSpec for line maintenance at their home location or airport. However, if they need to perform line maintenance away from the home location, then all of the provisions of the line maintenance apply, and they receive OpSpec listing each location.
- f) The DAAO Inspector must complete the review as required for each location and determine if the AMO can complete the requested maintenance for the air carrier at each location.

e. Other Issues.

- 1) An AMO only receives authorized line maintenance based upon a demonstrated ability to perform the scope of work for a specific air carrier at a specified location. It cannot receive authorization for emergency maintenance and any work away from that location.
- 2) This does not prevent the appropriately rated main base from doing work away from station. However, any location listed on the OpSpec cannot authorize work away from station. The OpSpec is an authorization for a specific maintenance function and air carrier at a specified location.
- 3) Additionally, several AMO had multiple locations for line maintenance all under separate certificates. If an AMO requests to have multiple locations, the OpSpec records the additional location(s) specific to the air carrier and the scope of work for that air carrier.
 - a) Each location must receive an evaluation to determine if the AMO meets all requirements from the scope of work for each air carrier and the parts, equipment, and personnel to support the requested maintenance for each air carrier at that location.
 - b) The DAAO Inspector for the parent AMO will assume the responsibility for all certification and surveillance of the additional locations.

NOTE: During surveillance activities, DAAO Inspector must ensure that AMO performing line maintenance are using the correct data from the correct operator, are operating from a location authorized in their OpSpecs, and are in compliance with part 145. The AMO Manual must reflect how it operates at each location and, if the AMO has elected to use other rule provisions such as work away from the fixed location, that procedures in the manual detail these operations

Table II-1 Airframe Ratings and Classifications

Rating	Class	Definitions and Notes
Airframe	Class 1: Composite construction of small aircraft	May perform maintenance and alterations of airframes and airframe components in accordance with part 43 on any article for which it is rated and within the limitations in its OpSpecs.
	Class 2: Composite construction of large aircraft	This rating also allows the removal and installation of powerplants, propellers, radios, instruments, and passenger convenience items, but not the performance of maintenance to internal sections of these components.
	Class 3: All-metal construction of small aircraft	Airframe: Fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of engines) and landing gear of an aircraft and its accessories and controls.
	Class 4: All-metal construction of large aircraft	<ul style="list-style-type: none"> ✓ Large Aircraft: Gross takeoff weight of more than 12,500 lbs. Typically considered transport-category aircraft. ✓ Small Aircraft: Gross takeoff weight of 12,500 pounds or less. Typically considered general aviation aircraft.

NOTE:

An AMO may maintain and alter any airframe or part thereof for which it has a rating. However, it may not maintain any TC'd products (engine or propeller) installed on the aircraft without the appropriate rating. Nor may it maintain or alter any part thereof unless it has evaluated its capability and

assured it has the tool, equipment, data, and personnel to do so. Maintaining powerplants, propellers, radios, and instruments requires additional ratings.

6. POWERPLANT RATINGS AND CLASSIFICATIONS

a. Components and Articles. Components and articles included in the powerplant rating are turbo-superchargers, magnetos, carburetors, appurtenances, and other articles necessary for the proper operation of the powerplant. Although the regulations do not define “powerplant”, they do define “aircraft engine.” This rating does not include removal and installation of the powerplant onto the aircraft. If a AMO wishes to maintain and also install the powerplant, it must obtain an appropriate limited airframe rating. See Table II-2, Powerplant Class Ratings (Under CASR Part 145.59)

NOTE: The guidance on limited ratings provided in **paragraph 5c** on this chapter also applies to limited powerplant ratings.

b. Limited Powerplant Ratings. Limited powerplant ratings must identify the powerplant manufacturer and the make/model of the powerplants the AMO intends to maintain. This type of rating, unless it includes limitations, allows complete repair or alteration of the powerplants listed.

1). Powerplant maintenance has also found numerous “niche” businesses that may include the performance of a specific maintenance function on a wide variety of powerplants. In this case, the OpSpecs would identify the manufacturer, but the make/model column could contain “all models” instead of identifying each model.

The limitations column would identify any limitations to its maintenance capabilities, such as, “Limited to plasma spray operations on Pratt and Whitney series turbine blades.” This rating allows the AMO to plasma spray all Pratt and Whitney turbine blades, regardless of the powerplant model the blades were from.

The OpSpecs would also need to list additional manufacturers if the AMO has the technical data, tools, and equipment to perform this maintenance function on those additional powerplants.

2). OpSpecs should identify the manufacturer and make/model authorized. Use of the term “all” (or series) may be appropriate when denoting the make/model in certain rare occasions.

However, the DAAO Inspector must use good judgment and carefully consider potential unintended consequences. If the inspector is not careful, use of the word “all” (or series) could inadvertently authorize work beyond the desired intent.

For example, use of the word “all” (or series) may be appropriate to authorize maintenance on certain Lycoming engines when used with a

qualifier such as “all horizontally opposed reciprocating engines.” Without such a qualifier, it is unclear if the DAAO Inspector intended to authorize maintenance on all Lycoming engines, including Lycoming turbine engines and Lycoming radial engines.

NOTE: Because maintenance procedures, tools, equipment, and technical data may differ between manufacturers, inspector must ensure that an AMO obtains the appropriate supporting requirements for the capabilities it is requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the DAAO does not endorse this practice.

- c. **Auxiliary Power Units (APU).** Currently, confusion exists when determining the appropriate rating for APU. An APU is an accessory by virtue of its function of providing power to the aircraft when the aircraft is not in flight.

However, some of the newer models of aircraft also use APUs as powerplants, which further blurs the lines between general aviation and corporate or commuter aircraft.

Until development of a new rating system, Inspector should consider those articles used as the primary means of propulsion for these newer aircraft as powerplants, not APUs, and should rate AMOs appropriately. However, AMOs performing maintenance or alterations on APUs used strictly to produce auxiliary power for transport-category aircraft should obtain an accessory rating.

Table II-2, Powerplant Class Ratings (Under CASR Part 145.59)

Rating	Class	Definitions and Notes
Powerplant	Class 1: Reciprocating engines of 400 horsepower or less	May perform maintenance and alterations of powerplants, but not to adjoining airframe or propeller components. AMOs may remove access panels, doors, and nacelles, as needed, to gain access to the powerplant.
	Class 2: Reciprocating engines of more than 400 horsepower	
	Class 3: Turbine engines	This rating does not include the installation of powerplants to the aircraft. A powerplant-rated AMO will also need a limited airframe rating to remove or install powerplants on the aircraft.

7. PROPELLER CLASS RATINGS (UNDER CASR Part 145.59)

See Table II-3, **Propeller Class Ratings (Under CASR Part 145.59)**

NOTE:

- a. The guidance on limited ratings provided in **paragraph 5c** of this chapter is also applies to limited propeller ratings.
- b. Because maintenance procedures, tools, equipment, and technical data may differ between manufacturers, inspector must ensure that AMO obtain the appropriate supporting requirements for the capabilities that the AMO is requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the DAAO does not endorse this practice

Table II-3 Propeller Class Ratings (Under CASR Part 145.59)

Rating	Class	Definitions and Notes
Propeller	Class 1: All fixed pitch and ground adjustable propellers of wood, metal, or composite construction	May perform maintenance and alterations on propellers, but not to adjoining airframe or powerplant components.
	Class 2: All other propellers, by make	A propeller, powerplant, or airframe-rated AMO may accomplish installation of propellers.

8. PROPELLER LIMITED RATINGS.

An AMO certificated as a propeller, powerplant, or airframe-rated AMO may install propellers and the attaching hardware. Because the process of installing a propeller does not significantly differ between aircraft and powerplants versus a propeller test bench, AMO with an airframe, powerplant, or propeller rating with appropriate privileges and limitations may install propeller assemblies.

9. RADIO AND INSTRUMENT RATINGS AND CLASSIFICATIONS (UNDER CASR Part 145.59).

- a. **Radio Rating.** The radio rating divides into communication, navigation, and radar classes. (See **Table II-4 Radio and Instrument Ratings and Classifications Under CASR Part 145.59.**) The basis of the first two classes, communication and navigation, is the intended function in the airplane, whereas the basis of the radar class is a specific technology or mode of operation. Modern avionics equipment typically integrates communications and navigation functions into a single appliance. Also, radar equipment or a radio that operates using pulse technology also serves communication and/or navigation functions. The combination of functionality and operations of these articles may require the AMO to

attain a rating for all three classes, depending on the complexity of the article.

- b. Instrument Rating.** The instrument rating divides into four classes—mechanical, electrical, gyroscopic, and electronic—based on the article’s general principles of operation. Multiple class ratings may be necessary to perform repairs on these articles.

NOTE:

- 1). Inspectors must ensure that an AMO obtains the appropriate supporting requirements for the capabilities it is requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the DAAO does not endorse this practice.
- 2). The guidance on limited ratings provided in paragraph 5c of this chapter also applies to limited radio and instrument ratings.
- 3). An AMO with a radio rating must also have a limited airframe rating if it removes or installs components, or alters the aircraft.

Table II-4 Radio and Instrument Ratings and Classifications Under CASR Part 145.59

Rating	Class	Definitions and Notes
Radio	Class 1: Communication equipment	Radio transmitting and/or receiving equipment used in an aircraft to send or receive communications in flight, including auxiliary and related aircraft inter-phone systems, electrical or electronic inter-crew signaling devices, and similar equipment. Does not include equipment for navigating or aiding navigation of aircraft.
	Class 2: Navigational equipment	A radio system used in an aircraft for en route or approach navigation. This does not include equipment operated on pulsed radio frequency principles, or equipment used for measuring altitude or terrain clearance.
	Class 3: Radar equipment	An aircraft electronic system operated on radar or pulsed radio frequency principles.
Instrument	Class 1: Mechanical	A diaphragm, bourdon tube, aneroid, optical, or mechanically-driven centrifugal instrument used on aircraft or to operate aircraft,

Rating	Class	Definitions and Notes
		including tachometers, airspeed indicators, pressure gauges drift sights, magnetic compasses, altimeters, or similar mechanical instruments.
	Class 2: Electrical	Self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.
	Class 3: Gyroscopic	An instrument or system using gyroscopic principles and motivated by air pressure or electrical energy, including automatic pilot control units, turn and bank indicators, directional gyros, and their parts, and flux gate and gyrosyn compasses.
	Class 4: Electronic	An instrument whose operation depends on electron tubes, transistors, or similar devices, including capacitance type quantity gauges, system amplifiers, and engine analyzers.

10. ACCESSORIES RATINGS AND CLASSIFICATIONS (UNDER CASR Part 145.59)

The accessory rating divides into mechanical, electrical, and electronic classes, based on an article's principle of operation. See Table II-5, Accessories Ratings and Classifications (Under CASR Part 145.59.)

The combination of functionality and operations of these articles may require the AMO to attain a rating for all three classes, depending on the complexity of the article.

NOTE:

- a. Inspector must ensure that an AMO obtains the appropriate supporting requirements for the capabilities it is requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the DAAO does not endorse this practice.
- b. The guidance on limited ratings provided in paragraph 5c of this chapter also applies to limited accessory ratings.

Table II-5, Accessories Ratings and Classifications (Under CASR Part 145.59.)

Rating	Class	Definitions and Notes
Accessory	Class 1: Mechanical	An accessory that depends on friction, hydraulics, mechanical linkage, or pneumatic pressure for operation, including aircraft wheel brakes, mechanically driven pumps, carburetors, aircraft wheel assemblies, shock absorber struts, and hydraulic servo units.
	Class 2: Electrical	An accessory that depends on electrical energy for its operation, and a generator, including starters, voltage regulators, electric motors, electrically driven fuel pumps, magnetos, or similar accessories.
	Class 3: Electronic	An accessory that depends on the use of an electron tube transistor, or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls.

11. LIMITED SPECIALIZED SERVICE RATINGS (UNDER CASR Part 145.61).

An applicant or a certificated AMO that performs specific processes associated with the maintenance, preventive maintenance, or alterations of an article receive limited specialized service ratings.

Generally, maintenance functions, performed in accordance with an approved process specification, receive limited specialized service ratings. A limited specialized service rating allows an AMO to perform specific processes associated with the maintenance, preventative maintenance, or alteration of articles, and approve them for return to service.

- a. **Limited Specialized Service Rating.** All AMO that have a limited specialized service rating use process specifications, in lieu of

manufacturer's maintenance data, when performing maintenance or alterations. However, just because a AMO uses a process specification does not mean the AMO needs a limited specialized service rating. It is inappropriate for an Inspector to initiate action to alter a AMO's ratings and OpSpecs based solely on the AMO's use of a process specification.

- b. Processes.** The process specification must involve a repair process or work scheme that is novel, unique, or unusual in application, which does not use the manufacturer's data for approving an article to its original condition, and that specifies repair limits. The AMO's OpSpecs must contain the specification used in performing that specialized service. The specification could be an DAAO- approved military, civil, or applicant-developed specification. Specialized services would include, but not be limited to, welding, heat treating, plating, and plasma spraying.

NOTE: An example of a novel and unique procedure for which an AMO would receive a limited specialized service rating would be the inspection of turbine blades using Krypton gas. This is a unique procedure not normally found or used in industry. Granting of the specialized service rating should only be if the process or procedure is unique, as explained in this example.

- c. Materials and Personnel.** The limited specialized service rating would require an AMO to have the housing, facilities, equipment, tools, trained personnel, and data to perform the process on an aviation article. The process specification on the OpSpecs would set forth the minimum standards for performing the generic process (specialized service).

For example, the process specification would include an explanation of the housing, facilities, equipment, tools, trained personnel, and data necessary for the overall process. The applicable manufacturer's maintenance manual, air carrier manual, or other DAAO-accepted or DAAO-approved data would define the specific parameters associated with performing the process on the particular aviation article.

12. RATING EXAMPLE.

Specific ratings issued to an AMO are dependent on the equipment, personnel, technical data, and housing and facilities of the AMO. Depending on how an AMO intends to perform a maintenance function, it may require multiple and or different ratings.

For example, to perform ATC transponder testing and inspections as described in part 43 appendix F, or altimeter system tests and inspections as described in part 43 appendix E, the following conditions in **Table II-6** would prescribe the requirement for different ratings.

Table II-6, Authorized AMO Ratings for CASR Part 91.411 and 91.413 Testing Authorized AMO Rating(s)

Condition	Rating(s)
CASR Part 91.411	
Component removed or installed by AMO	Airframe Class or Limited Airframe, appropriate to airplane or helicopter tested.
Integrated system tested on aircraft without removal or installation, normal operation of system without disassembly of aircraft.	Instrument rating Class I. Limited Instrument rating appropriate to appliance. Airframe Class (...), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
Specific components tested on the bench (may not satisfy all requirements).	Instrument rating Class I. Limited Instrument rating appropriate to appliance. Airframe Class (.....), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
CASR Part 91.413	
Component removed or installed by AMO..	Airframe Class or Limited Airframe, appropriate to airplane or helicopter tested.
Integrated system tested on aircraft without removal or installation, normal operation of system without disassembly of aircraft.	Radio rating Class III. Limited Radio rating appropriate to appliance. Airframe Class (.....), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
Specific components tested on the bench (may not satisfy all requirements).	Radio rating Class III. Limited Radio rating appropriate to appliance.

Condition	Rating(s)
	Airframe Class (...), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.

13. RESERVED.

CHAPTER III – CERTIFICATION OF DOMESTIC AMO

1. INTRODUCTION.

- a. **Objective.** This chapter provides guidance for evaluating an applicant for certification under CASR part 145 as a domestic AMO. This chapter also provides guidance for evaluating an applicant for a satellite AMO under the managerial control of a certificated AMO. This guidance may be applied to a certificated AMO/satellite AMO transitioning to the AMO Manual / Quality Control Manual (QCM) and training program currently used by the AMO with managerial control.
- b. **The Certification Process** This process provides for interaction between the applicant and the DAAO, from initial inquiry to issuance or denial of an Approved Maintenance Organization (AMO) certificate. It ensures that programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, tested, and integrated throughout the AMO(s). The main responsibility for certification process of AMO under this instruction is in SubDirectorate of Standardization-DAAO.

The certification process consists of **five phases**:

- 1) Preapplication phase,
- 2) Formal application phase,
- 3) Document compliance phase,
- 4) Demonstration and inspection phase, and
- 5) Certification phase.

2. PREAPPLICATION PHASE.

- a. **Response to Initial Inquiry.** Respond to an initial inquiry for an AMO certificate or satellites.
- b. **Previously Surrendered or Revoked Certificate.** If an applicant requests certification less than 1 year after surrender or revocation of its previous certificate, DAAO will be initiated to identify and evaluate any potential associated risk.
- c. **Topics for Discussion.** Discuss with the applicant the following subjects:
 - 1) The necessary technical expertise required by the applicant's proposed organization, to include the following:
 - a) Aviation-related experience,

- b) Proposed organizational structure, and
 - c) Knowledge of the specific maintenance functions to perform.
- 2) The rating required for the type of work to accomplish.
 - 3) The requirements for sufficient personnel to meet the demands of the proposed AMO. This includes at least one certificated person with appropriate ratings that coincide with the ratings sought.

NOTE: the supervisor and the person authorized to approve an article for return to service must be certificated under part 65

- 4) Facility requirements for the ratings sought, to include:
 - a) The need for ventilation, lighting, and control of temperature, humidity, and other climatic conditions to ensure personnel can perform maintenance as required by this part;
 - b) The size of the facility;
 - c) Manufacturers' recommended or equivalent test equipment; and
 - d) Special tools, etc.
- 5) The requirements for current technical data appropriate for the work to perform. The following receive consideration as technical data:
 - a) Airworthiness Directives (AD),
 - b) Instructions for continued airworthiness (ICA),
 - c) Maintenance manuals,
 - d) Overhaul manuals,
 - e) Standard practices manuals,
 - f) Service Bulletins (SB), and
 - g) Other applicable data acceptable to or approved by the DAAO.

NOTE: Appliance manufacturers' maintenance manuals or instructions, though not specifically approved by the DAAO, receive consideration as in compliance with part 43, CASR Part 43.7; part 65, subpart B; part 121, CASR Part 121.379(b); Part 135.379(b); and CASR Part 145.201.

- 6) The requirement to provide the DAAO with a Point Of Contact (POC).

d. Paperwork and Timeframe. The DAAO will give Form 120-01 – Pre Application Statement of Intent (PASI) to the applicant with instructions for completion. Advise the applicant to submit the completed application to the DAAO. Inform the applicant that the certification process cannot continue until the review and acceptance of the application.

- 1) The DAAO should advise the applicant of the complexity of the process and provide the applicant with an estimated timeframe for the completion of the project. (This is a recommendation only; the timeframe allows the applicant the ability to make the appropriate business decisions and is also dependent on the applicant's ability to comply with the requirements.)
- 2) Advise the applicant to develop a time line so that all involved are aware of their commitments and obligations.

NOTE: The DAAO inspector should advise the applicant that there are time restrictions for processing applications due to DAAO resource availability. An application for certification must not remain dormant. A lack of applicant activity for 90 days during the certification process will result in termination of the application.

e. Initiate the Certification Process.

- 1) The DAAO will review the PASI for acceptance and completeness.
- 2) In section 2 of the PASI, the inspector will check the "Information only" block and enter the date the office received and reviewed the PASI.
- 3) The DAAO Director or designee will assign an inspector or a team of inspectors (depending on the complexity of the application) to the certification process. The Director or designee will also designate an inspector as the Certification Project Manager (CPM).
- 4) The CPM will contact the applicant to arrange a preapplication meeting.

f. Conduct Preapplication Meeting. Meet with the applicant to discuss questions concerning the certification process, regulatory requirements, the formal application and attachments, etc. Accomplish the following during the meeting(s):

- 1) Discuss the regulations applicable to the proposed maintenance operation.
- 2) Provide the applicant with the following material:
 - a) Guidance materials for developing and evaluating AMO Manual and Quality Control Manuals;
 - b) Guidance materials for developing AMO Training Program;

- c) A copy of DAAO Form 145-01, Application for AMO Certificate of Approval
- 3) Inform the applicant that a formal application package for a AMO certificate must contain the following material:
- a) A completed DAAO Form 145-01.
 - b) A copy of the AMO Manual, Safety Management System (SMS) Manual, and QCM in a format acceptable to the DAAO. If the manual or manuals submitted are in electronic media format, they must be compatible with DAAO electronic capabilities and free of any programs that would adversely affect that capability.

NOTE:

Electronic media must be compatible with the DAAO's system. If an applicant's media is not compatible, then the DAAO cannot consider it acceptable.

- c) A training program manual applicable to employees assigned to perform maintenance, preventative maintenance, alterations, and inspection functions.
- d) A letter requesting processing of the application, indicating when facilities, equipment, material, and data will be ready for formal inspection.
- e) A letter of compliance with applicable CASR's
- f) When requesting a limited rating, the make and model of the particular item(s) to be maintained and the nature of the work to be performed.
- g) When seeking approval of a Class 2 propeller rating, a list by make of the propeller.
- h) When making a request for a limited specialized services rating, and the applicant develops the specification, advise the applicant that the DAAO must review the specification, which may cause some delay in the AMO certification process. If the specification contains data that is a major repair or major alteration, then that data must be DAAO-approved.

NOTE:

- i. The AMO may request a limited rating for specialized services utilizing a civil or military specification currently used by industry.

- ii. The DAAO Inspector should carefully consider if this specification covers all areas required for the repair prior to approval.
 - iii. Will this repair, when completed, allow approval for return to service for the article? If the specification does not meet the requirements of CASR Part 43.13, then the DAAO Inspector should inform the applicant that the specification may be used as part of a process the applicant can develop under the provisions of CASR Part 145.61(c)(2).
 - iv. The DAAO Inspector should not accept the process at face value, but must evaluate if the process is appropriate for the article.
 - v. The DAAO Inspector should annotate the need for additional limitations, if any, in the limitation section of the OpSpecs.
 - vi. Many civil and military specifications currently used by industry are generic. The DAAO Inspector should verify that the AMO has provisions in its manual for evaluation of the article to determine if anything would prohibit the specification utilization.
- 4) If the applicant requested certification of a AMO with managerial control in conjunction with certification of one or more satellites, the CPM should advise the applicant of the privileges, limitations, and responsibilities of each. The applicant must submit an application package for each AMO and identify which AMO will have managerial control. The AMO with managerial control is determined by the applicant, not by DAAO/. Ownership, size of facility, or other factors may not necessarily indicate managerial control. This is also true when an applicant applies for a satellite AMO certificate under the managerial control of an existing certificated AMO.
- 5) The DAAO Inspector/team will evaluate the results of the preapplication meeting; if acceptable, continue to next phase.

3. FORMAL APPLICATION PHASE.

- a. Receive the Formal Application.** Ensure submission and completeness of all documents.
- b. Evaluate the Application Package.** Based on the initial survey of the application package, make a decision whether or not to continue with the certification process.
- c. Conduct an Application Meeting.** Answer any open questions concerning the package before proceeding to the next phase. Do this in the most effective way possible; e.g., meetings or correspondence.

4. DOCUMENT COMPLIANCE PHASE.

a. Review the Application Package. Review the content of each submitted document for regulatory compliance. The documents for review include:

- 1) A completed DAAO 145-01. For a satellite AMO, the request should not include any ratings not held by the managerial AMO unless an exemption is obtained.
- 2) Statement of Compliance with current the Indonesia CASR Part 145;
- 3) AMO Manual Quality Control/System Manual;
- 4) Safety Management System Manual;
- 5) Training Program Manual;
- 6) Roster of Certifying Personnel;
- 7) Requested Company Capability List.

b. Review Documentation. One document may contain the AMO Manual/QCM manuals. They do not have to be separate manuals. If a satellite AMO certificate is sought, the AMO manual/QCM should be the manual(s) submitted by the AMO with managerial control to include information/procedures detailing operational differences applicable to the satellite.

- 1) Training program. If a satellite AMO certificate is sought, the training program submitted by the satellite should be the same program submitted by the AMO with managerial control to include information/procedures detailing training differences applicable to the satellite(s).
- 2) Statement of compliance must address each section of CASR part 145.
- 3) Hazmat training certification, when required, this must be submitted prior to certificate issuance.
- 4) The list of makes and models of the particular item(s) to be maintained and the nature of the work to be performed for any limited ratings.
 - a). Normally, the DAAO will not issue a class rating on an initial certification. All new applications should receive a limited rating until the AMO performs enough work to establish a representative number of make and models that would qualify the AMO for a class rating.

- b). The DAAO Inspector should exercise discretion when using the term “representative number,” as this will vary with the type of application and the depth and complexity of the work performed.
 - c). An applicant would normally receive an airframe Class 4 rating after demonstrating the ability to maintain one of each make in that class (i.e., Boeing 747, Airbus A300, or MD-11).
 - d). An accessory, radio, instrument, etc., class rating would differ from the airframe rating because of the various makes/models of valves, radios, instruments, and other articles that are very similar in design and function.
 - e). The issuance of a class rating would be at the discretion of the applicant and agreeable to the DAAO Inspector when the applicant has demonstrated the capability to maintain several different articles.
 - f). When a AMO with managerial control is issued a class rating, CASR Part 145.107(a)(1) is not intended to preclude the satellite from holding an associated limited rating. For example, it is acceptable for the AMO with managerial control to hold an airframe Class 4 rating, while the associated satellite holds a limited airframe rating.
 - i. The list, by make, of the propeller for a Class 2 propeller rating.
 - ii. A copy of the acceptable/approved specification for the work to be performed for a specialized service rating, when applicable.
 - iii. A copy of a capability list, if appropriate (CASR Part 145.215).
- c. Document Deficiencies.** If any document has deficiencies, return it to the applicant with a letter outlining the deficient areas. Inform the applicant that the certification process will not continue until all deficiencies are resolved.

5. DEMONSTRATION AND INSPECTION PHASE.

During the demonstration and inspection phase, the CPM should verify that the AMO meets the requirements of CASR Part 145.51(b).

Although the AMO is allowed to contract a maintenance function to an outside source, the CPM must verify that the AMO is capable of performing the maintenance under the rating requested.

Contracted maintenance functions must not circumvent the certification requirements. Unless the DAAO indicates otherwise, personnel and equipment from the certificated AMO with managerial control and from each of the satellite AMOs may be shared in accordance with CASR Part

145.107(b). Shared personnel must be qualified and familiar with any procedural differences at each assigned location.

a. Coordinate and Schedule Inspection. Coordination is required between the CPM, team members, and the applicant.

- 1) During the inspection phase, the team should verify that the AMO manual and the QCM are followed.
- 2) The team should also use the AMO letter of compliance to confirm that the facility meets all the requirements of the regulations.

b. Perform a Housing and Facility Inspection. During the demonstration and inspection phase, inspect the AMO facilities to ensure that the work performed has protection from weather elements, dust, and heat. Ensure that the control of temperature, humidity, and other climatic conditions allow personnel to perform maintenance functions to the standards required by this staff instruction. In addition, inspect for the following:

- 1) Tooling and equipment are properly stored and maintained in good working order:
 - a) Calibration is performed at established intervals and meets the requirements of CASR Part 145.109.
 - b) If the AMO obtains special equipment and tools as needed in accordance with CASR Part 145.109, verify that a contract is available for review to ensure that the tools and equipment will be available upon the AMO's request.

NOTE: All tools and equipment must be in place at the time of initial certification or rating approval by the DAAO (CASR Part 145.51(b)).

- 2) Material. Ensure that all materials needed for the rating are on the premises and under the AMO's control during work performance.
 - a) Ensure that the AMO has the proper controls for stored material and a recordkeeping system that has document traceability back to the place of purchase.
 - b) Traceability of all materials in the supply room must have documentation to show the material qualification (e.g., invoice, process specifications, and supplier qualifications).
 - c) If necessary, a AMO surveillance program of its suppliers to meet the above will meet these requirements.

3) Calibration Standards.

- a) The calibration standards of all test and measuring equipment, except those used in continuity checks for troubleshooting, will receive testing at regular intervals to a standard derived from the Komite Akreditasi Nasional or National Accreditation Committee (KAN/NAC) or a standard provided by the manufacturer.

NOTE:

- i. The part 145 rule states that tooling is calibrated to a national standard or other standard acceptable to the DAAO.
 - ii. An AMO must have an exemption authorization if it uses equipment of a manufacturer and does not address the method of calibration. Currently, exemptions of this type last for 2 years and are renewable if requested by the AMO.
- b). Test and inspection equipment and special tooling (equivalent) manufactured by an AMO must meet the calibration standards recommended by the manufacturer of the article being measured or tested. This type of test equipment calibration will be traceable to a KAN/NAC standard or a standard acceptable to the DAAO.
- 4) Facilities are adequate to perform the functions as defined in the AMO manual and QCM.

c. Evaluate Maintenance Organization. Ensure the following:

- 1) The inspection system is in place (see chapter V of this SI) to ensure:
 - a) Employees are familiar with and are capable of performing their assigned duties,
 - b) The system for reporting serious defects or unairworthy conditions is in place to ensure compliance with CASR Part 145.221,
 - c) The maintenance recordkeeping system is in place to ensure compliance with part 43 and CASR Part 145.219, and
 - d) The AMO has a QC system in place that ensures the articles upon which the AMO or any of its contractors perform a maintenance function are Airworthy.
- 2) There are a sufficient number of personnel to satisfy the volume and type of work to perform, as required by part 145 subpart D:
 - a) Ensure the AMO designates an employee as the accountable manager;

- b) Ensure the AMO provides qualified personnel to plan, supervise, perform, audit, and approve for return to service the work for which it is rated;
 - c) Ensure it has a sufficient number of employees with training or knowledge and experience in accomplishing the work being performed; and
 - d) Determine the abilities of its noncertificated employees performing maintenance functions based on training, knowledge, experience, or practical tests.
- 3) A personnel roster(s) is available that includes management, supervisory, and inspection personnel responsible for the AMO operations, oversight of maintenance functions, and personnel authorized to sign a maintenance release for approving an article for return to service (see CASR Part 145.161); and
 - 4) Management, supervisory, and inspection personnel employment summaries for those persons listed above are available (see CASR Part 145.161).

d. Analyze Deficiencies.

- 1) If you note deficiencies, notify the applicant in writing. If appropriate, meet with the applicant to review deficiencies in detail.
- 2) The applicant must take corrective action and notify the CPM in writing in order for the certification process to continue. Fully document and record each deficiency and corrective action in the certification file.

6. CERTIFICATION PHASE.

a. Prepare Documents. When the applicant has met all regulatory requirements, the CPM / DAAO Inspector will accomplish the following:

- 1) Complete applicable blocks of DAAO Form 145-04, to show:
 - a) Findings and recommendations,
 - b) Any remark or discrepancy noted during inspection,
 - c) Date of inspection, and
 - d) Office and signature of the CPM / DAAO Inspector
- 2) Prepare DAAO Form 145-2 (Certificate of Approval) and OpSpecs showing the limitations issued. Form DAAO 145-2 and OpSpecs shall be signed by Director DAAO on behalf of Director General of Civil Aviation.

- 3) If applicable, issue OpSpecs with appropriate ratings.

NOTE: Certificate of Approval and OpSpecs are legal documents. Language should clearly specify the authorizations, ratings, and/or limitations being approved. When filling out these forms, there must not be any erasures, strikeouts, or typographical errors on the completed document.

b. Prepare Certificate of Approval and Operations Specifications.

Approved maintenance organization certificate and operations specifications are legal documents. Language should clearly specify the authorizations, ratings, and/or limitations being approved. When filling out these forms, there should not be any erasures, strikeouts, or typographical errors. Detail procedures and process to issue AMO certificate and operations specifications will include must follow chapter VIII of this SI.

c. Prepare Certification Report. Ensure preparation of a certification report. The report must include the name and title of each DAAO Inspector on the certification team. The CPM / DAAO Inspector signs the report, which contains at least the following:

- 1) A copy of the PASI;
- 2) DAAO Form 145-01 completed;
- 3) A statement of compliance;
- 4) A copy of the Certificate of Approval issued;
- 5) A copy of the issued OpSpecs;
- 6) A copy of the hazmat letter if required; and
- 7) A summary of all discrepancies encountered during the inspection.

7. TASK OUTCOMES.

a. Complete the Task. Completion of the certification task will result in one of the following:

- 1) Issuance of a certificate and OpSpecs, or
- 2) A letter to the applicant indicating denial of the certificate, or
- 3) A letter to the applicant confirming termination of the certification process.

b. Distribute Certification Report. Retain the original certification report in the DAAO file office.

c. **Document the task.** File all supporting paperwork in the DAAO office file.

8. FUTURE ACTIVITIES.

Perform followup and surveillance inspections as required.

CHAPTER IV – RENEWAL OF DOMESTIC AMO

1. INTRODUCTION

- a. **Objective.** This section provides guidance for evaluating an applicant for renewal of a CASR part 145 domestic Approved Maintenance Organization (AMO). For the purposes of this chapter, AMO applicants from part 145 facilities may be referred to as “applicants,” “AMO,” or “facilities.”
- b. **The Renewal Process.** This process provides for interaction between the applicant and the DAAO. It ensures that programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, tested, and integrated throughout the AMO(s). The main responsibility for certification process of AMO under this instruction is in SubDirectorate of Standardization-DAAO.

The renewal process consists of:

- 1) Formal application phase,
- 2) Document compliance phase,
- 3) Demonstration and inspection phase, and
- 4) Certification phase.

2. FORMAL APPLICATION PHASE.

- a. **Renewal Time Frame.**
An AMO located at Republic of Indonesia must renew its certificate before exceeding one (1) year from the date of issue or last renewal.
- b. **Application Submission Time Frame.** The AMO is responsible for submitting a new application 30 days before the expiration date of its certificate.
- c. **Tracking Program.** The DAAO must track renewal dates to establish an effective yearly work program.
- d. **Documents.** Ensure that all documents for the formal application package have been submitted and are complete. Verify the inclusion of the following:
 - 1) Completed DAAO Form 145-01.
 - 2) A statement/document about the AMO's continuing need for the DAAO certificate.

- 3) List of contractors if changes have been made to it since the AMO's last renewal. A copy of those changes must be included in the package.
- 4) AMO Manual/QCM, if either of the manuals has been revised since the AMO's last renewal. A copy of the revision must be provided with the application package.
- 5) A statement of compliance with the current Indonesia CASR Part 145;

3. DOCUMENT COMPLIANCE PHASE.

a. Review the Application Package. Review the content of each submitted document for regulatory compliance. The documents to be reviewed include:

- 1) A completed DAAO Form 145-01.
- 2) The AMO's list of maintenance functions to be contracted to another entity, if changes have been made. (See CASR Part 145.217.)

b. AMO Manual / QCM or Section. If revisions are made to these manuals, they should be reviewed as they are submitted. In some cases, an AMO may elect to revise its manuals for its certificate renewal. Regardless of when they are submitted, the DAAO must approve these revisions. The revision's inclusion should not delay the renewal process. The DAAO may elect to review the revisions and approve or reject them after the certificate renewal has been completed based on the old manuals.

c. Document Any Deficiencies. Conduct a thorough and comprehensive review of all documents. If deficiencies are found in any document, return it to the applicant with a letter outlining the deficient areas. Inform the applicant that the certification process will not continue until all deficiencies are resolved.

The applicant must provide the DAAO with a written response that identifies the approximate date the errors will be corrected and the document resubmitted. The inspector's letter to the applicant must be as clear and complete as possible to avoid causing delays from documents being mailed back and forth without resolving issues.

d. Review Corrective Action Plan. Continue with the renewal process if the AMO provides a corrective action plan that satisfies the requirements of the inspection.

4. DEMONSTRATION AND INSPECTION PHASE.

a. Renewal Procedures. The Inspection for renewal certificate of approval will cover area and procedure identified in SI 8900-6.9

b. Line Station Authorization Surveillance. An AMO QC/QA system audit is required to ensure compliance with its QC/QA procedures. Review the

audits of line stations to ensure the AMO has visited each of its line stations once per year.

The QC/QA audit should provide a report for each line station showing which station the inspector audited, the date of the audit, what the inspector audited, and findings and corrective action identified during the audit. Once a year, perform a physical inspection of a minimum 10 percent sampling of line stations to confirm the effectiveness of the AMO's QC procedures.

5. CERTIFICATION PHASE.

a. Prepare Documents. When the applicant has met all regulatory requirements, the DAAO Inspector will accomplish the following:

- 1) Complete DAAO Form 145-4, following "For DAAO official only" block insert (as applicable):
 - a) Any remark or discrepancy noted during inspection,
 - b) Findings and recommendations,
 - c) Date of inspection, and
 - d) Office and signature of the DAAO Inspector.
- 2) Prepare DAAO Form 145-2 (Certificate of Approval) and OpSpecs showing the limitations issued. Form DAAO 145-2 and OpSpecs shall be signed by Director DAAO on behalf of Director General of Civil Aviation.

NOTE: Certificate of Approval and OpSpecs are legal documents. The language should clearly specify the authorizations, ratings, and/or limitations being approved. When completed, these forms should have no erasures, strikeouts, or typographical errors.

b. Prepare Certificate of Approval. See Chapter III paragraph 6b of this SI.

c. Prepare OpSpecs. See Chapter III paragraph 6c of this SI.

d. Prepare Certification Report. Ensure that a certification report is prepared. The report must include the name and title of each DAAO Inspector on the certification team. The DAAO Inspector signs the report, which contains at least the following:

- 1) The completed DAAO 145-4 (including a list of functions the AMO will contract out, if changed since last renewal),
- 2) A copy of the statement/document of need showing the necessity for the certificate,

- 3) A copy of the certificate of approval issued,
- 4) A copy of the issued OpSpecs, and
- 5) A summary of all discrepancies encountered during the inspection.
- 6) A statement of compliance with the current Indonesia CASR Part 145;

6. TASK OUTCOMES.

- a. Complete the Task. Completion of the certification task will result in one of the following:
 - 1) Issuance of a certificate and OpSpecs.
 - 2) A letter to the applicant indicating the DAAO denied the issuance of the certificate (as applicable).
 - 3) A letter to the applicant confirming termination of the certification process (as applicable).
- b. Distribute Certification Report. See Chapter III paragraph 7 of this SI
- c. Document the Task. See Chapter III paragraph 7 of this SI

7. FUTURE ACTIVITIES.

Perform followup and surveillance inspections as required.

CHAPTER V – AMENDMENT OF DOMESTIC AMO

1. INTRODUCTION

a. Objective. This section provides guidance for evaluating an applicant for amendment of a CASR part 145 domestic Approved Maintenance Organization (AMO). For the purposes of this chapter, AMO applicants from part 145 facilities may be referred to as “applicants,” “AMO,” or “facilities.”

b. Amendment to or Transfer of Certificate. Section 145.57 specifically requires an AMO to submit a new application in the following situations:

- 1) The holder of an AMO certificate must apply for a change to its certificate if it changes the location of the AMO or requests to add or amend a rating. The AMO certificate holder must notify the DAAO in advance and the DAAO may prescribe conditions that the AMO must follow when moving to a new address or location.
- 2) If the holder of the AMO certificate sells or transfers its assets, the new owner must apply for an amended certificate in accordance with CASR part 145.51. On occasion, AMO ownership changes without changing the facilities and personnel.

c. The Amendment Process. This process provides for interaction between the applicant and the DAAO. It ensures that programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, tested, and integrated throughout the AMO(s). The main responsibility for certification process of AMO under this instruction is in SubDirectorate of Standardization-DAAO.

The amendment process consists of:

- 1) Formal application phase,
- 2) Document compliance phase,
- 3) Demonstration and inspection phase, and
- 4) Certification phase.

2. FORMAL APPLICATION PHASE

Additional ratings or change to the certificate will be the same process as renewal of a certificate discussed in chapter IV of this SI, but must also include:

- a. A copy of DAAO Form 145-01 (including a list of functions that the applicant intends to contract to another facility);

- b. A revised statement of compliance that address the items changed (added rating, address change, etc.);
- c. If applicable, a revised letter certifying the employees have been trained to ICAO hazmat standards, as described in chapter III of this SI.

3. DOCUMENT COMPLIANCE PHASE.

Follow the same renewal process discussed in chapter IV of this SI. Ensure that any manual revision required by the application for an added rating or change to the certificate is reviewed for compliance with CASR part 145. Manual revisions and documentation findings should be dealt with as discussed in chapter III & IV of this SI.

4. DEMONSTRATION AND INSPECTION PHASE.

This phase should follow the same requirements as discussed in chapter IV of this SI, as appropriate to the requested change to the AMO certificate and OpSpecs.

5. CERTIFICATION PHASE

Amendments to an AMO certificate and OpSpecs must be accomplished as discussed in chapter III of this SI and must reflect the applicant's requested change.

6. TASK OUTCOMES.

These are the same as discussed in paragraphs chapter II of this SI.

7. FUTURE ACTIVITIES.

Perform followup inspection and surveillance inspections, as required.

CHAPTER VI – EVALUATION AND APPROVAL OF AMO AND QC MANUAL

1. INTRODUCTION.

a. **Objective.** This chapter provides guidance for evaluating, approving, or rejecting all CASR 145 AMO Manual and/or Quality Control Manual (QCM) original submissions or revisions.

b. **General.**

- 1) **Currency of a QCM.** Before issuing a Certificate of Approval, the applicant's AMO Manual and/or QCM must reflect the applicant's current procedures. As required by part 145, CASR Part 145.207 & 211 AMO Manual must be approved by DAAO and in QCM in a format approved by DAAO.
- 2) **Revision of an Existing Manual.** When a certificate holder revises an existing manual, the DAAO must also approve the revisions as appropriate.
- 3) **Manual Content.** The manuals submitted by a certificate holder or applicant may be separate or may be combined into a single manual. The format should be consistent and all regulatory requirements must be included. The DAAO Inspector must ensure the procedures used in the performance of maintenance, preventive maintenance, or alterations are reflected accurately in the manuals. It is expected that, to fully describe the AMO's inspection/quality system, there will be some procedures that may not be regulatory.
- 4) **Original Certification Versus Revision.** When evaluating a manual as part of an original certification, each entire manual will be submitted prior to certification. If this task is performed as a revision, only the portion of the manual that is revised must be submitted.
- 5) **AMO Manual and QCM.** Each certificated AMO must maintain a current AMO Manual and QCM.
- 6) **Accessibility of Manual.** A certificated AMO's current AMO Manual /QCM must be accessible for use by AMO personnel. All AMO employees on all shifts must have access to the manual, regardless of the media used (electronic, CD-ROM, etc.).
- 7) **DAAO.** A certificated AMO must provide to DAAO the current AMO Manual /QCM in a format approved to the DAAO. If the manuals or manual submitted are in electronic media format, they must be compatible with DAAO electronic capabilities and free of any programs that would adversely affect that capability.

- 8) **Recommendations for Manual Development.** There are some recommendations included in this Staff Instruction and guidance material for developing and evaluating AMO Manual and Quality Control Manual. They have been included to assist the inspector and certificate holder/applicant in developing a more complete description of the AMO's overall functions, responsibilities, and quality control procedures.
- 9) **Maintenance and Alterations in Accordance With Air Carrier's Manuals.** For certificate holders under CASR's parts 121 and 135, and for foreign air carriers or foreign persons operating a Indonesian registered aircraft in common carriage under CASR part 129, maintenance, preventive maintenance, and alterations must be performed in accordance with applicable sections of that air carrier's manuals.

2. AMO MANUAL PROCEDURES.

- a. **Manual Formats.** Receive the certificate holder or applicant's manual or revision as required by CASR Part 145.51, 145.207, and 145.211(c).
- b. **Manual or Revision Content.** Review the submitted manual or revision to ensure that it meets the regulatory requirements of CASR Part 145.209 and 145.211. The manual or revision must include the following:
 - 1) Cross reference matrix of the CASR Part 145 requirements with AMO manual.
 - 2) An organizational chart that identifies:
 - a). Each management position with authority to act on behalf of the AMO.
 - i. The organizational chart required by CASR Part 145.209 may identify management positions by title only.
 - ii. Management includes, but is not limited to, the executive functions of planning, organizing, coordinating, directing, controlling, and supervising.
 - iii. This does not eliminate the requirement in CASR Part 145.51 for an applicant to submit the names and titles of its management and supervisory personnel at the time of application.
 - b). The area of responsibility assigned to each management position, which is the area(s) in the AMO that the manager is directly accountable for and maintains decision authority over.
 - c). The duties, responsibilities, and authority of each management position.

3) Procedures for maintaining and revising the rosters required by CASR Part 145.161.

NOTE: As required by CASR Part 145.161(b), within 5 business days of the revision, the rosters required by this section must reflect changes caused by termination, reassignment, change in duties, scope of assignment, or addition of personnel.

- 4) A description of a AMO's operations describing how the maintenance is to be performed, where it would start, and how it progresses through the entire repair cycle for approval for return to service. Also include:
- a) A description of the housing may include dimensions, construction method, heating and ventilation systems, lighting, door openings, and physical address.
 - b) A description of the facilities that describes how the shop, hangar, or other work areas are laid out.
 - c) A description of the equipment, tooling, and materials used to perform maintenance.

NOTE: The "description of materials used to perform maintenance" should not be a physical description of the material, but rather an explanation of the AMO's handling and storage of the materials. If materials require specific environmental controls or cannot be stored next to certain chemicals or solvents, these should be identified. For example, it would not be acceptable to store oxygen equipment near petroleum products.

- i. If the AMO does not own the equipment, procedures must be included in the manual that describe how the equipment will be obtained (lease, rentals, etc.). The manual must also include where the equipment will be used, how personnel will be trained to use the equipment, and how the AMO will ensure calibration issues, if any, are addressed after transporting the equipment.
- ii. If the AMO chooses to use equipment, tools, or materials other than those recommended by the manufacturer, the manual must include a procedure used by the AMO to determine the equivalency of that equipment, tool, or material.
- iii. When the AMO is adding a rating, or an applicant has applied for certification, all required equipment for the rating it seeks must be in place for inspection by the DAAO. This provides the DAAO Inspector with the opportunity to evaluate its placement and use and to verify that AMO personnel are trained to operate it.

- 5) Capability list procedures used to:
 - a) Revise the capability list provided in CASR Part 145.215 and notify the DAAO of revisions to the list, including how often the DAAO will be notified of revisions; and
 - b) Develop and perform the self-evaluation required by CASR Part 145.215(c) for revising the capability list, including the methods and frequency of such evaluations and procedures for reporting the results to the appropriate manager for review and action.
- 6) Procedures for revising the training program and submitting revisions to the DAAO for approval, which should include:
 - a) The title of the person authorized to make a training program revision;
 - b) The method of submitting a revision (electronic, hard copy, disk, etc.); and
 - c) A procedure for recording a revision and a method of identifying the revised material or text.
- 7) Procedures for accomplishing work performed at a location other than the AMO's fixed location, which should contain the following:
 - a) Title of the person responsible for determining the location is appropriate for the work performed.
 - b) Title of the person responsible for initiating such work and assigning the personnel necessary to perform inspections and supervise the work.
 - c) Procedures for communication between responsible AMO personnel at the fixed location and the maintenance personnel working away from the station. This should include the transfer of parts, supplies, tools/equipment, technical data, and trained personnel.
 - d) Procedures that will be used away from the AMO if they deviate from established procedures used at the fixed location. The AMO must ensure that all work performed while exercising the privileges of its certificate is accomplished per the appropriate maintenance manual and its AMO Manual or QCM. The determination for performing work at another location must meet the following requirements:
 - i. The work is necessary due to a special circumstance, such as a one-time occurrence, as determined by the DAAO; or

- ii. It is necessary to perform such work on a recurring, but not continuous, basis and the AMO Manual includes the procedures for accomplishing maintenance, preventive maintenance, alterations, or specialized services at a place other than the AMO's fixed location.

NOTE: The DAAO determination must be made prior to the performance of any maintenance, preventive maintenance, or alterations away from the AMO's fixed location unless an acceptable procedure is included in the manual.

- 8) Procedures for performing maintenance, preventive maintenance, and alterations for certificate holders under CASR parts 121 and 135 and for foreign air carriers or foreign persons operating an Indonesian registered aircraft in common carriage under part 129.
 - a) The DAAO requires that maintenance under a Continuous Airworthiness Maintenance Program (CAMP) be performed in accordance with the operator's manual. It is the operator's responsibility to ensure the work performed on its behalf is done in accordance with the approved maintenance program.
 - b) The certificated AMO that performs maintenance, preventive maintenance, or alterations for an air carrier or commercial operator that has a CAMP under part 121 or 135 must follow the air carrier or commercial operator's maintenance program or applicable sections of its maintenance manual.
 - c) A certificated AMO that performs maintenance, preventive maintenance, or alterations for a foreign air carrier or foreign operator operating an Indonesian registered aircraft under part 129 must follow the operator's DAAO approved maintenance program.
 - d) The DAAO may authorize a certificated AMO to perform line maintenance on any aircraft of an air carrier certificated under part 121 or 135, or of a foreign air carrier or foreign operator operating an Indonesian registered aircraft in common carriage under part 129, provided the certificated AMO:
 - i. Has the appropriate ratings to perform the maintenance or preventive maintenance on transport-category aircraft;
 - ii. Performs such line maintenance in accordance with the operator's manual and approved maintenance program;
 - iii. Has the necessary equipment, trained personnel and technical data to perform such line maintenance; and
 - iv. Has operations specifications (OpSpecs) that include an authorization to perform line maintenance.

NOTE: An AMO must be appropriately rated to perform line maintenance for an air carrier. This would normally require an airframe rating to accomplish scheduled checks, daily inspections, or servicing of articles. However, an AMO with the appropriate ratings may accomplish unscheduled maintenance and repairs. This could include avionics facilities limited to avionics functions such as troubleshooting electrical or electronic systems or replacing defective electronic articles.

- 9) Procedures for maintaining and revising the contract maintenance information, including the submission of revisions to the DAAO for approval and how often the DAAO will be notified of revisions.
 - a) The DAAO must approve the maintenance functions to be contracted.
 - b) The AMO must maintain a list of each facility that it contracts maintenance functions with, including the type of certificate and ratings (if any) held by each facility.
 - c) The maintenance function list does not need to be included in the manual, but the manual should include the location or office where the list is maintained.

NOTE: Maintenance functions are a step or series of steps in the process of performing maintenance, preventive maintenance, or alterations which result in approving an article for return to service. It is not the intent of this rule to create "virtual AMOs" that provide only an approval for return to service. ASIs must evaluate the amount of work a AMO desires to contract out versus the work that is performed in-house.

- 10) A description of the recordkeeping system used by the AMO to obtain, store, and retrieve the records required by CASR part 43. These records must be in English.
- 11) Procedures for revising the AMO Manual and notifying its DAAO of revisions to the manual, including how often the DAAO will be notified of revisions. The procedure must include:
 - a) The title of the person authorized to make a revision;
 - b) The method of submitting a revision (electronic, hard copy, disk, etc.);
 - c) A procedure for recording a revision and a method of identifying the revised material or text; and
 - d) A description of the system used to identify and control sections of the AMO Manual.

c. Recommended Procedures and Reports. Although not required by CASR Part 145.209 or 145.211, it is recommended the manual include the following:

- 1) Procedures for submitting reports, in a format approved to the DAAO of any serious failure, malfunction, or defect in accordance with CASR Part 145.221. An AMO must report to the DAAO within 96 hours after it discovers any serious failure, malfunction, or defect of an article. If the AMO performs maintenance, preventive maintenance, or alterations for an air carrier, the manual should also contain procedures on how it will notify the operator when submitting reports.
- 2) Procedures for detecting and reporting suspected unapproved parts.

3. QCM PROCEDURES.

NOTE: The QCM may be separate from the AMO Manual or included in that manual as a separate section or volume.

a. Documentation, Inspections, and Training. A certificated AMO must prepare and keep current a QCM in a format approved to the DAAO. Depending upon the size, complexity, and rating(s) of the AMO, that manual should include a description of the system and procedures used for:

- 1) Receiving and documenting articles, standard parts, and raw materials.
- 2) Performing incoming inspections of raw materials and standard parts that check for:
 - a) Proper documentation, identification, and traceability;
 - b) Conformity to a specification and acceptable quality;
 - c) Shelf life;
 - d) Contamination;
 - e) Shipping damage; and
 - f) State of preservation.
- 3) Performing preliminary inspection of all articles that are maintained or altered to check for:
 - a) Proper documentation, identification, and traceability;
 - b) Shipping damage and contamination;
 - c) State of preservation;

- d) Life limits;
 - e) Airworthiness Directives (AD) and Service Bulletins;
 - f) Functional test or tear down inspections;
 - g) DAAO approval of new articles; and
 - h) Determination of what repairs are necessary.
- 4) Inspecting all articles that have been involved in an accident for hidden damage before maintenance, preventive maintenance, or alteration is performed. Ensure that items are disassembled as necessary and inspected for hidden damage in adjacent areas.
- 5) Performing in-progress inspections to ensure inspections, testing, and/or calibration are conducted at various stages while the work is in progress.
- 6) Performing final inspections and approvals for return to service.
- a) Ensures the inspection, testing, and/or calibration of articles, including documentation, is accomplished at the completion of maintenance or alteration.
 - b) The manual must include a procedure for approval for return to service.
- 7) Ensuring continuity of inspection responsibility.
- a) Include procedures for ensuring that the responsibilities of any inspector are properly performed in their absence.
 - b) If the AMO has multiple shifts, include procedures to ensure the continuing responsibility for maintenance in progress through the use of a status book, shift turnover log, or similar documents.
- 8) Calibrating measuring and test equipment used in maintaining articles, including the intervals at which the equipment will be calibrated.
- 9) Taking corrective action on deficiencies related to AMO operation.
- a) Section 145.211(c)(1)(ix) states that the QCM must include procedures used for taking corrective action on deficiencies. A corrective action is taken to remedy an undesirable situation. The correction of deficiencies is normally an integral part of a AMO's improvement process, and could include revisions to procedures that were not working properly (reference AC 145-9, paragraph 4-13 for additional guidance).

- b) Corrective action requires that a fact-based investigation determine the root cause or causes to eliminate them. Corrective action would be applicable in two situations: Before the article is approved for return for service and after the article has been approved for return to service.
- c) If a deficiency is found before the article is approved for return to service, the AMO should follow its procedures describing how rework will be accomplished. If the deficiency is noted after the article is approved for return to service, the AMO should follow its procedures to notify the DAAO and the owner/operator of any potential problems and recall any unairworthy parts or products.

The objective of the investigation into the cause of the deficiency and the corrective actions taken is to eliminate any potential safety threats posed by unapproved or improperly maintained parts or products and to prevent a recurrence of the same or similar problems.

NOTE: When the DAAO receives notification of a deficiency found after the article is approved for return to service, it shall be investigated for possible violations of part 43 and/or 145.

- d) The procedures in the QCM should include a system for documenting any deficiencies and the corrective actions taken to prevent a recurrence. The system should let employees track any open corrective action requests and the date the corrective action is due. The program should also be tracked to include audits of the corrective action(s) taken to ensure it was effective. These audits should also be tracked to ensure that they are completed in a timely fashion.
- 10) Establishing and maintaining proficiency of inspection personnel.
- a) The procedure should ensure that inspection personnel are familiar with the applicable regulations and are proficient at inspecting the articles they are assigned to inspect.
 - b) Testing, formal training, recurrent training, or a combination of these methods could be used to maintain the proficiency of inspection personnel.
- 11) Establishing and maintaining current technical data for maintaining articles.
- 12) Revising the AMO's quality manual and notifying its DAAO of revisions to the manual, including how often the DAAO will be notified of revisions. The procedure must include:
- a) The title of the person authorized to make a revision;

- b) The method of submitting revisions (electronic, hard copy, disk, etc.); and
 - c) A procedure for recording revisions and a system for identifying revised material or text.
- 13) Qualifying and surveying noncertificated persons who perform maintenance, preventive maintenance, or alterations for the AMO. A certificated AMO may contract a maintenance function pertaining to an article to a noncertificated person, provided that:
- a) The noncertificated person follows a quality control system equivalent to the system followed by the certificated AMO;
 - b) The certificated AMO remains directly in charge of the work performed by the noncertificated person;
 - c) The certificated AMO verifies, by testing and/or inspecting, that the work has been performed satisfactorily and that the article is airworthy before approving it for return to service; and
 - d) The noncertificated person's contract allows the DAAO to inspect or observe work being performed on any articles for the certificated AMO.

NOTE: The ability to inspect a noncertificated person can only be accomplished while the contract is in force. This requirement does not give DAAO Inspectors access to non-DAAO certificated facilities if there is no work being performed under contract for a certificated AMO.

14) Establishing a quality assurance system that includes:

- a) An independent internal audits which covers all AMO operation area in order to monitor compliance with required aircraft/aircraft component standards and adequacy of the procedures to ensure that such procedures invoke good maintenance practices and airworthy aircraft/aircraft components.
- b) A quality feedback reporting system to the accountable manager that ensures proper and timely corrective action is taken in response to reports resulting from the internal independent audits.
- c) Ensure that person performing audit have been qualified in accordance with CASR Part 145.159

- b. Manual References.** Where applicable, the manual should contain references to the instructions for continued airworthiness, maintenance manuals, inspection standards, or other approved or accepted data specific to the article being maintained.

- c. Inspection and Maintenance Forms.** A sample of each of the inspection and maintenance forms used in the performance of maintenance and the instructions for completing those forms.

NOTE: These forms may be addressed in a separate accepted manual that is submitted to the DAAO and maintained in current condition by the AMO.

4. TASK OUTCOMES.

a. Complete the Task.

- 1) Completion of this task will result in the following actions:
 - a) If no regulatory conflicts were found, the DAAO may send a transmittal document acknowledging receipt of the manuals.
 - b) If conflicts with the rule are noted, the DAAO Inspector will detail those discrepancies in writing to the certificate holder.
- 2) Inspectors may:
 - a) Inform the certificate holder that no deficiencies were noted. This should not be mistaken as an “approval” of the manuals.
 - b) Approve the manuals or a revision by sending the certificate holder a letter indicating the date; document, manual, or revision number; and an approval statement.

b. Rejection. Reject the manual(s) or revisions by doing the following:

- 1) Initiate a cover letter indicating the date and document, manual, or revision number of the document or manual being rejected.
- 2) Return all copies to the applicant with an explanation of discrepancies that must be corrected and instructions for resubmitting the documents in order to proceed with the certification or revision process.

c. Approval Once the applicant/certificate holder receives the approval of the AMO Manual and/or QCM, and/or the training program and/or manual, copies of the manuals or disks must be provided to the DAAO. The DAAO Inspector will file a copy in the certificate holder/applicant’s office file along with a copy of the acceptance letter.

- 1) In a paper revision, the DAAO Inspector will remove the affected pages and insert the revised pages in the manuals or the training program. The DAAO Inspector will update the manual control system and file the cover letters in the appropriate office file.

2) In an electronic format, the DAAO Inspector will replace the outdated disk with the current or initial manual or training submission. The DAAO Inspector will place a copy of the acceptance letter in the certificate holder's office file.

d. Document the Task. File all supporting paperwork in the certificate holder/applicant's office file.

5. **FUTURE ACTIVITIES.** Continue inspection as required by SI 8900-6.9 (Inspection of a CASR Part 145 AMO)

CHAPTER VII – EVALUATION OF AMO FACILITIES

1. INTRODUCTION.

a. **Objective.** This chapter provides evaluation and inspection guidance for a CASR part 145 AMO for original certification, change in rating, change in location, or adding facilities.

b. **General.**

- 1) When determining the suitability of permanent housing or other facilities used for the maintenance of an aeronautical article, the inspector should consider climatic conditions. This is to determine if high or low temperatures, excessive dust or sand, or other conditions will adversely affect worker efficiency. The inspector should also consider the maintenance being performed to determine if work processes are adversely affected by environmental conditions.
- 2) Applications for a AMO certificate, amendment to, transfer of, or an additional rating must be made in a format acceptable to the DAAO and conform to the requirements of part 145. Additional guidance for the certification and operation of a part 145 AMOs may be found in other chapters of this SI as well as the guidance materials for for developing and evaluating AMO Manual and Quality Control Manuals.

2. SATELLITE AMO INSPECTION.

a. A certificated AMO may apply for additional facilities or locations to become satellites of the AMO with managerial control. If practical, the satellite AMO may use all or portions of the managerial AMO's manuals to develop its own manuals. Each satellite must satisfy all requirements of part 145 for each rating sought. Ratings for the satellite may not exceed the rating of the managerial AMO .

- 1) Personnel and equipment from the AMO with managerial control and each certificated satellite AMO under its control may be shared.

NOTE: Procedures must be included in the manual to describe how tools will be recalibrated or removed from service if calibration is compromised during their transport between facilities

- 2) Inspection personnel must be designated for each satellite AMO and be available at the AMO anytime a determination of airworthiness or return to service is made. In other circumstances, inspection personnel may be away from the premises but must be available by telephone, radio, or other electronic means.

- 3) The satellite AMO may not hold a rating that is not held by the certificated AMO with managerial control.
- 4) The satellite AMO must be located in the same domicile country as the certificated AMO with managerial control.

b. A satellite facility inspection is conducted in the same manner as a AMO facility inspection.

3. AMO INSPECTION.

NOTE: The following procedures apply to all AMOs regardless of their geographic location (domestic AMO)

a. Each certificated AMO must provide the following:

- 1) Housing for the facilities, equipment, materials, and personnel consistent with its ratings.
- 2) 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:
 - a) Sufficient work space and areas for the proper segregation and protection of articles during all maintenance, preventive maintenance, or alterations;
 - b) 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 alterations;
 - c) Suitable racks, hoists, trays, stands, and other segregation means for the storage and protection of all articles undergoing maintenance, preventive maintenance, or alteration;
 - d) Space sufficient to segregate articles and materials stocked for installation from those articles undergoing maintenance, preventive maintenance, or alteration; and
 - e) 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 part.

b. A certificated AMO with an airframe rating must provide suitable permanent housing to enclose the largest type and model of aircraft listed on its operations specifications (OpSpecs).

NOTE: Each certificated AMO must have a fixed location where materials, equipment, tools, and data are stored. While consideration can be given for certain operating situations, aviation DAAO Inspector must not authorize “virtual” or completely “mobile” AMO.. Even though the majority of the work is done away from the fixed location, each AMO must have a permanent, fixed base from which it operates the AMO .

- 1) DAAO Inspector should evaluate the housing needs of the AMO based upon the depth and complexity of the work the AMO will perform. For example, if an airframe-rated AMO will only be doing interior refurbishment or interior electrical work that does not require the aircraft to be completely housed, a nose dock or other similar housing may suffice for the housing requirement. Any work done on removed aircraft components must be accomplished in an appropriate housing, back shop, or other permanent structure.
 - 2) AMO that frequently work away from their fixed location must ensure another certificate holder’s housing and facilities are adequate and meet the requirements of the regulations for the ratings that they hold. Procedures should be included in their manuals that describe how they will evaluate a certificate holder’s facilities prior to performing maintenance under the privileges of their certificate at the facility.
 - 3) Some AMO, such as internal fuel tank AMO, do not require housing that will enclose the largest aircraft listed on their OpSpecs. Most of this type of work is performed in the aircraft wing, and protection from the elements should not be a major consideration. The use of mobile coverings to protect articles being installed or removed from the wing should provide sufficient protection from the elements.
- c.** A certificated AMO may perform those maintenance functions for which it is rated on articles outside of its housing if it provides suitable facilities that are acceptable to the DAAO. The facility must meet the requirements of CASR Part 145.103(a), and the work must be done in accordance with the requirements of part 43 of this chapter.
- d.** A certificated AMO may perform maintenance, preventive maintenance, or alterations for the following certificated operators or carriers:
- 1) A CASR part 121 or part 135 air carrier or commercial operator that has a continuous airworthiness maintenance program and the AMO must follow their program and applicable sections of their maintenance manual.
 - 2) A foreign air carrier or foreign person operating an Indonesian registered aircraft and the AMO must follow the operator’s DAAO-approved maintenance/inspection program.
- e.** A certificated AMO may be authorized to perform line maintenance for an air carrier certificated under part 121 or 135, a foreign air carrier, or a

foreign person operating a Indonesian-registered aircraft in common carriage under part 129, provided:

- 1) The AMO performs such line maintenance in accordance with the operator's manual and approved maintenance program;
- 2) The AMO has the necessary equipment, trained personnel, and technical data to perform such line maintenance; and
- 3) The AMO OpSpecs includes an authorization to perform line maintenance.

NOTE: All certificated AMO must have suitable permanent housing and facilities. Although CASR Part 145.205(d) allows some deviation from the housing requirement, that requirement is based upon the AMO having suitable housing at another location that meets the requirements of part 145. If line maintenance is the only maintenance an AMO is certificated to perform, the AMO must still meet the housing and all other applicable requirements of part 145. Housing need not be on the airport where the line maintenance is performed, but the street address must be listed on the AMO OpSpecs.

- f. An AMO may have the need to perform maintenance away from its permanent fixed base of operation. This requirement may be necessary due to a special circumstance, as determined by the DAAO, or may be recurring based on a AMO's need. Such work may include, but not be limited to: Aircraft recovery; Biennial testing of systems on aircraft operating under Instrument Flight Rules (IFR); Fuel cell maintenance; Nondestructive Testing (NDT) inspections; and Interior modifications.
 - 1) An AMO performing maintenance away from its fixed location may transport the materials, equipment, and technical personnel to the aircraft location or facility to facilitate the required maintenance.
 - 2) At no time while performing work away from its fixed base will the work scope exceed the capabilities for which the AMO is rated.
 - 3) An AMO that performs maintenance functions away from its fixed location on a recurring basis must ensure the temporary facility it uses meets the requirements of CASR Part 145.103(a).
 - 4) The AMO must ensure that its AMO manual includes the procedures for accomplishing maintenance, preventive maintenance, alterations, or specialized services at a place other than the AMO's fixed location.
- g. An AMO may need to perform maintenance at multiple fixed locations (i.e., additional facilities/localized within a defined area).

- 1) An AMO does not require a satellite certificate if it is seeking to work at another site within a localized area. A localized area may be defined as several buildings or hangars, which may be on or near an airport or at or near the primary fixed base address as stated on the AMO OpSpecs. AMOs using multiple fixed locations under a single air agency certificate need not have all the tools, equipment, data, or personnel at each location. The AMO's primary fixed base and any additional fixed locations are considered a single AMO. Each facility address must be listed in the AMO OpSpecs. This situation is not considered work away from the station.
- 2) The AMO manual must incorporate procedures that reflect how the AMO will meet the requirements of part 145 at each of its facilities. The procedures must include any supplemental operations (i.e., movement of articles, equipment, or tools required to perform the work) that may affect the AMO's ability to ensure the airworthiness of the articles maintained by the AMO. The AMO remains directly in charge of the work performed at all fixed locations.
- 3) All fixed location addresses must be listed on the AMO's OpSpecs. The AMO must submit a written request/application to use additional locations prior to exercising the privileges of its certificate and ratings at the additional fixed locations. The DAAO must inspect and approve each location and update the OpSpecs with the address for each additional location.
- 4) There also may be instances where an engine test cell facility is located away from the primary facility but operates under the same certificate as the primary facility. This may occur when:
 - a) The DAAO determines that the separate locations do not have any significant impact on the maintenance performed, and the separate locations are under the full control of the primary facility; and
 - b) The separate facilities must be in a defined area relative to the primary facility, and located within the same country. A DAAO inspector must be able to use ground transportation to get from one facility to another without major expense or inconvenience.
- 5) OpSpec must contain the address of all of the AMO's additional fixed locations.

4. PROCEDURES.

- a. **Review Documentation.** Review the AMO Certificate Manuals/Revision, Capabilities Listing, and OpSpecs for accuracy to determine that ratings are appropriate for work being performed, for accuracy. Also determine if maintenance functions will be contracted out, and contracted persons will meet the requirements of part 145, CASR Part 145.217.

b. Evaluate the Housing and Facilities. Inspect the following:

1) Housing and shop areas to ensure the following:

- a) Adequate housing includes sufficient workspace for maintenance functions to be accomplished.
- b) If a AMO holds an airframe class rating or limited airframe (specific model aircraft) rating, that housing includes suitable permanent housing for the largest type and model aircraft listed on its OpSpecs.

NOTE: If climatic conditions allow, the AMO may perform maintenance, preventive maintenance, or alterations outside of its housing if these facilities are acceptable to the DAAO and meet the requirements of CASR Part 145.103(a).

- c) Proper storage and protection of:
 - I. Materials,
 - II. Parts, and
 - III. Supplies.
- d) Proper identification and protection of parts and subassemblies during:
 - i. Disassembly,
 - ii. Cleaning,
 - iii. Inspection,
 - iv. Repair,
 - v. Alteration, and
 - vi. Assembly.
- e) Segregation of the following:
 - i. Incompatible work areas (e.g., metal shop, battery charging area, or painting area next to an assembly area);
 - ii. Unpartitioned parts cleaning areas; and
 - iii. Articles and materials stocked for installation from those articles undergoing maintenance or alteration.

- f) Proper ventilation, lighting, and temperature and humidity for the type and complexity of work being accomplished.
- 2) Technical documents to ensure that they are current and accessible when relevant work is being performed:
- a) Airworthiness Directives (AD),
 - b) Instructions for Continued Airworthiness (ICA),
 - c) Maintenance manuals,
 - d) Overhaul manuals,
 - e) Standard practice manuals,
 - f) Service Bulletins, and
 - g) Other applicable data acceptable to or approved by the DAAO.
- 3) Equipment, tools, and test equipment, to ensure:
- a) Required types and quantities are available and under the control of the AMO during performance of the work function.
 - b) All test and inspection equipment and tools used to make airworthiness determinations are calibrated to a standard acceptable to the DAAO.

NOTE: The part 145 rule states that tooling is calibrated to a standard acceptable to the Administrator. That may be a standard derived from the Komite Akreditasi Nasional or National Accreditation Committee (KAN/NAC), or a standard provided by the equipment manufacturer.

- c) An AMO may substitute manufacturers' tooling with one that is of its equivalent. If the AMO uses equivalent tooling it is responsible for the determination of equivalency. The AMO must provide a means to the DAAO that will demonstrate that the tool meets the manufacturer's standards and specifications with all respects regarding tolerances and accuracy.
 - i. The special equipment or test apparatus must be capable of performing all normal tests and checking all parameters of the equipment (article) under test. The level of accuracy should be equal or better than that recommended by the manufacturer.
 - ii. The equivalency can only be made based upon an evaluation of a technical data file. The AMO will establish a technical data file for each piece of equivalent tooling. The file will contain, but is

not limited to, data, drawings, specifications, instructions, photographs, templates, certificates, and reports. a.

- ✓ In the case of calibration equipment, the technical data file should also include data sheets attesting to the accuracy when calibration standards are necessary, as well as any special manufacturing processes that are used, including gauges and recording equipment in the controlling process.
- ✓ If calibration equipment is involved, adequacy of that calibration system shall be established with documented procedures to evaluate the adequacy of that calibration equipment and its traceability to one of the previously listed standards.

iii. A demonstration of the functionality of the special equipment or test apparatus may be necessary to determine its equivalency.

c. Analyze Findings. If deficiencies were found, meet with the certificate holder to discuss possible corrective actions.

5. TASK OUTCOMES.

a. Complete the Task. Completion of this task will result in one of the following:

1) If the facilities were found acceptable:

- a) An entry into the DAAO Form 145-01 stating satisfactory on the "For DAAO official only" section; and
- b) A letter to the AMO acknowledging the successful completion of the inspection (optional).

2) If the facilities were found unacceptable:

- a) A letter describing any deficiencies that must be corrected; and
- b) A followup evaluation to ensure that the AMO is in compliance with regulations.

b. Document Task. File all supporting paperwork in the certificated AMO 's office file.

6. FUTURE ACTIVITIES. Perform followup inspection, as appropriate.

CHAPTER VIII – AMO CERTIFICATE OF APPROVAL AND OPERATIONS SPECIFICATIONS

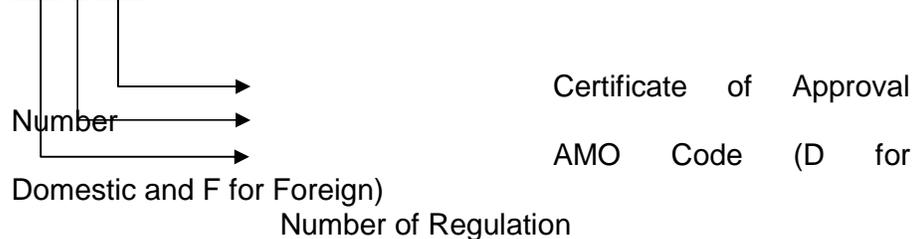
1. AMO CERTIFICATE OF APPROVAL

a. **General Information.** Certificate of Approval, refer to DAAO Form 145-2 is authority granted by the DGCA for a Approved Maintenance Organization to conduct bussiness.

b. The certificate will include the following information:

- 1) After 'Number', insert the certificate number assigned to the facility.
This will be in accordance with the current numbering system. e.g.

145 F 001



- 2) After 'this certificate is issued to'. Insert the official name of applicant's business. For inserting this, must be same as shown on the application form.
- 3) Under 'whose business address is', insert the address / location of the applicant's business. For inserting this, must be same as shown on the application form, DAAO Form 145-1 Application For Organization Approval
- 4) After 'to operate as an', insert the words Approved Maintenance Organizations or Satelite Approved Maintenance Organization.
- 5) Under 'with the following ratings': insert the ratings, limited ratings or limited specialized services issued. The ratings must be listed by the general category, such as airframe, powerplant, radio, etc.
 - If an Approved Maintenance Organizations is issued limited ratings, then it must be listed as such on the certificate, e.g., limited airframe, limited powerplant, limited radio, etc.
 - When ratings are added or amended, the date of each issuance will be shown under “date of issue” with the wording “amendment number:”.
- 6) After 'shall continue in effect for period of', insert the word for a period of one year.
- 7) Under 'Date of issue', insert the issuance date of the certificate. This will be the date of original certification. For renewal, insert date of reissue.

- 8) Under 'On behalf of the Director General of Civil Aviation', insert the signature of the Director of Airworthiness and Aircraft Operations.

2. OPERATIONS SPECIFICATIONS

a. **General information**, Operations specifications is part of AMO Certificate of Approval and in effect as of the date of approval is effective. DAAO Form 145-3 is issued by DGCA to indicate the limitations to the ratings as specified on the Certificate of Approval. On the DAAO form 145-3, following information shall be printed in every pages of operations specifications:

- 1) Name of AMO
- 2) AMO certificate of approval number;
- 3) Date of issuance of OpSpec;
- 4) Amendment status
- 5) Signature of approval from Director DAAO or his/her designee (only in every last paragraph)

b. **Content of OpSpec**. The operations specifications consist of paragraph A001 until A007

- 1) **A001, ISSUANCE AND APPLICABILITY**. For CASR part 145 AMO, A001 lists the:
 - Location;
 - Mailing address (if different from the fixed location);
 - Other “doing business as” (DBA) names, if authorized;
- 2) **A002, RATINGS AND LIMITATIONS**. A002 is a mandatory paragraph issued to CASR part 145 AMOs and lists the authorized class ratings, limited ratings, and limited specialized services ratings held by the certificate holder.

a) **Class Ratings**.

Class ratings are issued if the AMO can prove its capability to maintain a representative number of products under this rating. After issuance of a class rating, it should not have restrictions to a specific product added. For such a case, issue a limited rating.

b) **Limited Rating**. This paragraph to allow the selection of a capability list when a limited rating has been issued. Fill out the “Manufacturer” cell/column or “Capability List, as Amended” or “NA.” When the accepted “Capability List, as Amended”

cell/column is selected then fill same statement in the "Make/Model" cell/column. The phrase from the accepted "Capability List, as Amended" indicates that the certificate holder will be using a current capability list that is acceptable to the DAAO and includes any additions made to the list using the self-evaluation process described in its manual. The DAAO inspector(s) will use "NA" if the ratings meet the criteria of CASR part 145, 145.61(b)(7), (9), (10), or (12).

In "Limitation" cell/column, for limited rating of specialized services, the operations specifications of the AMO must contain the specification used to perform the specialized service. The specification may be:

- i. A civil or military specification currently used by industry and approved by the DGCA, or
- ii. A specification developed by the applicant and approved by the DGCA.

Note:

AMO is not required to have powerplant rating to perform powerplant maintenance under airframe maintenance package, if the AMO can prove its capability.

- 3) **A003, EXEMPTIONS.** In order for an operator to conduct operations under the provisions of any exemption, the exemption must be listed in A003. The current exemption number and expiration date must be selected for insertion into A003. List the exemption numbers in numerical order. Enter a brief description of the exemption or, if appropriate, the exempted regulations in the space labeled "Conditions and Limitations" (adjacent to each exemption). If certain conditions or limitations related to the exemption are specified in another paragraph of the OpSpec, the reference number of the other paragraph must also be entered in this space. For example, if operation of an AMO without a hangar door is permitted, insert the limitations, if any, in the "Remarks/References" section.
- 4) **A004, DESIGNATED PERSONS.** List the authorized person(s) by name, and title as the primary contact of the AMO to DAAO.
- 5) **A005, ADDITIONAL FIXED LOCATIONS.** This paragraph identifies additional locations (facilities) that collectively form a certificated CASR part 145 AMO's primary fixed location without having to certificate each facility as a stand-alone or satellite AMO.
 - a. **Additional Locations.** All additional locations of the certificated AMO must be under the full control of the primary facility listed in OpSpec A001. Individual facilities are not required to be completely equipped with tools, equipment, and parts, but must have them available when they perform the work.

b. **AMO manual.** The AMO manual must contain detailed procedures for the transport of equipment and parts between facilities. The AMO Manual should also outline procedures to ensure that adequate personnel are available to support the additional fixed locations/facilities while articles are undergoing maintenance. Further, using additional fixed locations does not constitute work away from the AMO.

6) **A006, WORK TO BE PERFORMED AT A PLACE OTHER THAN THE AMO'S FIXED LOCATION (CASR part 145.203(b)).** This paragraph is issued to authorize a CASR part 145 AMO to perform work on a recurring basis at a location other than the fixed location(s) listed in OpSpecs A001 and A005, if issued. The AMO may accomplish this by temporarily transporting material, equipment, and personnel to perform specific maintenance functions at other locations.

NOTE: If the AMO only anticipates the need to work at another location for special circumstances, and not as part of day-to-day operations, the AMO must submit a request to the DAAO for determination on a case-by-case basis. OpSpec A006 should not be issued. In order to receive a A006 authorization, the AMO must show the DAAO that it is necessary to perform work at another location on a recurring basis.

Table 1

Work Authorized	AMOs Manual References	Quality Control Manual References

a. **Work Authorized.** The work authorized in A006, Table 1 could be AMO's entire rating or portions thereof. The DAAO should work with the AMO to evaluate and determine what level of need exists for this authorization.

b. **AMO manual.** The AMO manual must set forth procedures that govern how the AMO will perform work on a recurring basis at a place other than the AMO. OpSpec A006, Table 1 must list the section(s) in the AMO and, if applicable, the Quality Control Manual (QCM) where these procedures can be found.

c. **Continuous Operations.** Issuance of OpSpec A006 does not authorize continuous operations at a location away from the AMO.

NOTE: A006 is not to be issued for a line maintenance authorization. Line maintenance is authorized under A007.

- 7) **A007, LINE MAINTENANCE AUTHORIZATION.** This paragraph permits a CASR part 145 certificate holder to perform line maintenance for certificate holders that conduct operations under CASR parts 121 and 135, and for foreign air carriers or foreign persons operating a Indonesian registered aircraft operating under CASR part 129.

NOTE: OpSpec A007 will only be issued when the AMO is performing line maintenance at an airport other than the airport at which their fixed base of operations is located, or if the AMO is limited to “line maintenance only” in OpSpec A002.

- a. **Required Rating.** The part 145 certificate holder must be appropriately rated to perform the maintenance. At a minimum, the AMO must have a limited airframe or airframe class rating to perform inspections and minor maintenance associated with a line maintenance authorization.
- b. **Limited Airframe Rating.** An AMO with a limited airframe rating must state in the “Limitations” cell/column of OpSpec A002 “(limited to line maintenance only).” The actual limitations will be listed in OpSpec A007. Regardless of the type of airframe rating of the AMO, OpSpec A002 must be issued to perform line maintenance. The certificate holder must also have the facilities, equipment, trained personnel, and technical data to perform such line maintenance.
- c. **OpSpec A007, Table 1.** OpSpec A007, Table 1 lists the locations where the AMO may perform line maintenance. The table consists of five sections:
 - 1) Section 1 identifies the name of the air carrier.
 - 2) Section 2 identifies the aircraft make/model.
 - 3) Section 3 identifies the International Civil Aviation Organization (ICAO) airport identifier and the name of the airport.
 - 4) Section 4 identifies the physical address where line maintenance is being performed,
 - 5) Section 5 identifies any line maintenance limitations.
- d. **Performing Operations.** Once line maintenance is authorized, the AMO can perform operations on a continuous basis.

NOTE: Before granting an OpSpec A007 authorization, the certificate holder must obtain from the air carrier a maintenance contractual arrangement authorization to perform the specified maintenance.

APPENDIX A - LIST OF DAAO FORMS RELATED TO AMO CERTIFICATION
/RENEWAL /AMENDMENT PROCESS

No	Form Number	Form Title
01	DAAO Form 120-01	Pre Application Statement of Intent (PASI)
02.	DAA Form 145-01	Application for Approved Maintenance Organization
03	DAA Form 145-02	Certificate of Approval
04	DAA Form 145-03	Operations Specifications (Opspecs)
05	DAA Form 145-04	Approved Maintenance Organization Inspection Checklist
06	DAA Form 43-01	Service Difficulty Report (SDR)