Notification of the Department of Air Transport

Relating to the Certification of Repair Stations

By virtue of Clause 12 of Regulation of Civil Aviation Board No. 78 on Aircraft Aviation announced on 4 January B.E. 2551 which requires that the operators with air operator certificate and general aviation operators shall proceed according to the regulations under other relevant aircraft aviation operation. The Department of Air Transport hereby announces the regulations relating to the certification of repair stations as follows:

Clause 1. Notification of the Department of Air Transport relating to the Certification of Repair Stations issued on 31 March B.E. 2551 shall hereby be repealed.

Clause 2. In this Notification:

"Articles" means aircraft, airframe, aircraft engine, propeller, appliance and component part.

"Accountable Manager" means the person who has been authorized by a certified repair station operator to have authority to and be responsible for the overall operation of the repair station according to this Notification including, ensuring that personnel in the repair station comply with this Notification and is responsible for the coordination with Officials from the Department of Air Transport.

"Directly in charge" means the responsibility of maintenance, preventative maintenance, alteration or other work that affects the airworthiness of an aircraft that the certified repair station operator has conducted. It is not required that the responsible person is supervising the personnel in-person, but shall be ready to advise on operational guidelines and make decision from a person with higher authority.

"Line Maintenance" means unscheduled maintenance that resulted from unexpected events including, scheduled service inspection or inspection that does not require training, equipment or specific facilities.

"Officials" means officials from the Department of Air Transport.

Chapter 1

General

Clause 3. Applicability

This Notification prescribes rules and procedures pertaining to application for repair station certification. The Notification also prescribes rules concerning maintenance, preventive maintenance or alteration of Articles that the certified repair station operator shall comply with, which are in accordance with the Notification of the Department of Air Transport relating to Maintenance, Preventive Maintenance, Restoration and Alteration.

Clause 4. Certificate and Operations Specification Requirements

Requirements of certification and operations specification requirements of repair stations are as follows:

(a) Any repair station that has the intention to conduct maintenance of Thai registered aircraft or maintenance of engine, propeller, and appliance and component parts installed on a Thai registered aircraft shall obtain a Repair Station Certificate as prescribed by this Notification.

(b) Certificated repair station operators shall keep the Repair Station Certificate and operations specification requirements of repair station at the repair station for the inspection of the general public and Officials.

Chapter 2

Certification

Clause 5. Application for Certificate

Any person who wishes to apply for the Repair Station Certificate and rating shall proceed as follow:

(a) Submit the application to the Department of Air Transport in accordance with the forms stipulated by the Department of Air Transport together with the evidence as follows:

(1) Repair Station Manual which the Department of Air Transport has accepted for use according to Clause 26;

(2) Quality control Manual which the Department of Air Transport have accepted for use according to Clause 28;

(3) List of requested Articles to provide maintenance for which specifies the type, name, make or model of the Article;

(4) Organization chart of the repair station; including name and position of managers and supervisors;

(5) Details of buildings and facilities including, the physical blueprints of the buildings according to Clause 13;

(6) Training plan which the Department of Air Transport have accepted for use according to Clause 22;

(7) List of work contracted to other parties according to Clause 31; and

(8) List of persons that approves the return of Article for return to service.

(b) shall readily prepare the equipment, personnel, technical information, building and facilities according to the requested rating or the requested increase of rating at the repair station for the inspection of Officials on the date of inspection. The applicant for the Repair Station Certificate may enter into a contract with other parties, which the Department of Air Transport accepts, to place the equipment at the repair station on the inspection date and is able to use the equipment at the repair station when needed at all times.

(c) shall state the reason to request for the certificate and rating.

Clause 6. Issue of Certificate

The Department of Air Transport shall issue the Repair Station Certificate and Rating and Repair Station Operations Specification only if it has reviewed all relevant documents, assessed

organizational readiness, controlling measures, regulation on repairing, and facilities of the repair station, and deemed that they are consistent to the characteristics of the applied operation in accordance with this Notification and the applicant is capable of safely carrying out such works.

Clause 7. Form, Duration, Renewal and Extension of Certificate

The form, duration, renewal and extension of Repair Station Certificate shall be as follows:

(a) The Repair Station Certificate shall be in accordance with the attachments in the annex of this Notification;

(b) The Repair Station Certificate duration shall be as specified in the Repair Station Certificate but shall not exceed 3 years from the date of issue;

(c) If the certified repair station operator wishes to extend the Repair Station Certificate, the operator shall submit the form prescribed by the Department of Air Transport, no later than 45 days before the expiration of the certificate together with the documents specified in Clause 5 (3) (4) (5) (6) (7) and (8). The Department of Air Transport shall grant an extension only if it sees that the certified repair station operator has maintained standards in safety operation. However, the Department of Air Transport may request for additional documents for consideration.

(d) If the certified repair station operator has submitted the extension form to the Department of Air Transport as stated in (c), but the Department of Air Transport cannot proceed with the inspection, the Department of Air Transport shall issue a letter extending the duration of the original certificate with the new date of expiration and shall send Officials to carry out an inspection and issue the new certificate within the duration of the extended date.

Clause 8. Cancelled Suspension or Revocation of Certificate

The Department of Air Transport may cancel, suspend or revoke the Repair Station Certificate if it appears that there was a mistake in the certificate, a mistake in the certification, the certificate is lost or damaged and in the case that the certified repair station operator engaged in any of the following acts:

(a) Violating or failing to comply with repair station operation manual;

(b) Violating or failing to comply with the manual or documents that have been approved by the Department of Air Transport;

(c) Violating or failing to comply with the regulations and safety operation practice specified by the Department of Air Transport;

(d) Modifies the manual or documents that have been approved by the Department of Air Transport without approval from the Department of Air Transport; or

(e) Does not correct according to the list and duration specified in Clause 33.

Clause 9. Amendments or Transfer of Certificate

The certified repair station operator shall comply with the amendment or transfer of certificate as follows:

(a) If the certified repair station operator wishes to; increase or decrease the rating, increase, decrease or amend the operations of repair station as specified in the repair station manual, change or modify the location or facilities of the repair station, the certified repair station shall submit the forms including the relevant documents, as prescribed by the Department of Air Transport, for the consideration of the Officials at least 45 days before the expected date of such change. The changed operation can proceed once the new certificate has been received and the original certificate shall be returned to the Department of Air Transport.

(b) Where the certified repair station operator that has sold or transferred the repair station to another party, the recipient shall apply for a new certificate in accordance with Clause 5.

Clause 10. Ratings

The Department of Air Transport shall issue the Repair Station Certificate according to the following ratings:

(a) Airframe Ratings as follows:

(1) Class 1: Composite construction of small aircraft (Maximum gross takeoff weight of 5,700 kilograms);

(2) Class 2: Composite construction of large aircraft (Maximum gross takeoff weight of 5,700 kilograms);

(3) Class 3: All metal construction of small aircraft (Maximum gross takeoff weight of 5,700 kilograms); and

(4) Class 4: All metal construction of large aircraft (Maximum gross takeoff weight of 5,700 kilograms).

(b) Powerplant Ratings as follows:

(1) Class 1: Reciprocating engines of 400 horsepower or less;

(2) Class 2: Reciprocating engines of more than 400 horsepower; and

(3) Class 3: Turbine engines.

(c) Propeller Ratings as follows:

(1) Class 1: All fixed pitch and ground adjustable propellers of wood, metal, or composite construction;

(2) Class 2: All other propellers, other than Class 1.

(d) Radio Ratings as follow:

(1) Class 1: Communication equipment includes radio transmitting and/or receiving equipment used in an aircraft to send or receive communications in flight. This equipment includes carrier frequency, type of modulation, aircraft interphone systems, amplifier systems, electrical or electronic intercrew signaling devices, and similar equipment. This equipment does not include equipment used for navigating or aiding navigation of aircraft, equipment used for measuring altitude or terrain clearance, other measuring equipment operated on radio or radar principles, or mechanical, electrical, gyroscopic, or electronic instruments that are a part of communications radio equipment.

(2) Class 2: Navigational equipment includes a radio system used in an aircraft for en route or approach navigation. This does not include equipment operated on radar or pulsed radio frequency principles, or equipment used for measuring altitude or terrain clearance, or distance measurement equipment operated on radar or pulsed radio frequency principles.

(3) Class 3: Radar equipment includes an aircraft electronic system operated on radar or pulsed radio frequency principles.

(e) Instrument Ratings as follows:

(1) Class 1: Mechanical include measurement devices that using a diaphragm, bourdon tube, aneroid, optical, or mechanically driven centrifugal instrument used on aircraft or to operate aircraft, including tachometers, airspeed indicators, pressure gauges drift sights, magnetic compasses, altimeters, or similar mechanical instruments.

(2) Class 2: Electrical include self-synchronous and electrical-indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.

(3) Class 3: Gyroscopic include any 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.

(4) Class 4: Electronic include any instrument whose operation depends on electron tubes, transistors, or similar devices, including capacitance type quantity gauges, system amplifiers, and engine analyzers.

(f) Accessory Ratings as follows:

(1) Class 1: A mechanical 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.

(2) Class 2: An electrical 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 electrical accessories.

(3) Class 3: An electronic accessory that depends on the use of an electron tube transistor, or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls.

Clause 11. Limited Ratings

The Department of Air Transport may consider limiting the ratings of repair station as follows:

(a) Maintaining or altering only a particular type of airframe, powerplant, propeller, radio, instrument, or accessory, or part thereof, or performs only specialized maintenance requiring equipment

and skills not ordinarily performed under other repair station ratings. Such a rating may be limited to a specific model aircraft, engine, or constituent part, or to any number of parts made by a particular manufacturer.

(b) The limited ratings shall be issued for:

(1) Airframes of a particular make and model;

(2) Engines of a particular make and model;

(3) Propellers of a particular make and model;

(4) Instruments of a particular make and model;

(5) Radio equipment of a particular make and model;

(6) Accessories of a particular make and model;

(7) Landing gear components;

(8) Floats, by make;

(9) Nondestructive inspection, testing, and processing (NDT);

(10) Emergency equipment;

(11) Rotor blades, by make and model;

(12) Aircraft fabric work; and

(13) Other objectives as the Department of Air Transport finds that the repair station has suitable ratings.

(c) In limiting rating for specialized services, it shall be prescribed in specification of repair station operation manual, which shall contain the specification used to perform the specialized service. The aforesaid specification may be that of a civil, Thai military or foreign military specification currently used by the industry and accepted by the Department of Air Transport, or a specification developed by the applicant and approved by the Department of Air Transport.

Chapter 3

Housing, Facilities, Equipment, Materials and Data

Clause 12 General

A certified repair station operator shall provide building, facilities, equipment, materials, and data that meet the requirements for the issuance of the certificate and ratings of the repair station.

Clause 13 Housing and Facilities Requirements

Each certified repair station operator shall provide buildings and facilities as follows:

(a) Each certified repair station operator shall provide the following:

(1) Building for the facilities, equipment, materials, and personnel suitable for its ratings.

(2) Facilities for properly performing maintenance, preventive maintenance, or alterations of Articles or the specialized services for which it is rated, which are required to consist of the following:

(2.1) Sufficient work space and areas for the proper segregation and protection of Articles during all maintenance, preventive maintenance, or alterations;

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

(2.3) Racks, hoists, trays, stands, and other segregation means for the storage and protection of all Articles undergoing maintenance, preventive maintenance, or alterations;

(2.4) Sufficient space to separate Articles and materials stocked for installation from those Articles undergoing maintenance, preventive maintenance, or alterations;

(2.5) 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 Notification.

(b) The certified repair station operator with an airframe rating shall provide suitable permanent building to enclose the largest type and model of aircraft listed on its operations specifications.

(c) The certified repair station operator may perform maintenance, preventive maintenance, or alterations on Articles outside of its building if it provides suitable facilities that are acceptable to the Department of Air Transport and meet the requirements of (a) so that the work can be done in accordance

with the requirements of the Department of Air Transport Notification relating to Maintenance, Preventive Maintenance, Restoration and Alteration

Clause 14 Change of Location, Housing, or Facilities

The certified repair station operator shall proceed with changing of location, housing, or facilities as follows:

(a) The certified repair station operator shall not change the location of its housing without written approval from the Department of Air Transport;

(b) The certified repair station operator shall not make any changes to its building or facilities required by Clause 13 that could have a significant effect on its ability to perform the maintenance, preventive maintenance or alterations under its Repair Station Certificate and operations specifications without written approval from the Department of Air Transport; and

(c) The Department of Air Transport may prescribe conditions, including any limitations, under which a certified repair station shall operate while it is changing its location, building, or facilities.

Clause 15 Satellite Repair Station

The certified repair station operator shall proceed with establishing a satellite repair station as follows:

(a) A certified repair station operator may establish a satellite repair station under the same certificate, which management of such satellite repair station is subject to the main certified repair station with the following conditions:

(1) The rating is permitted under the scope of the certified repair station;

(2) Complying with the requirements for each rating it holds;

(3) Having a repair station manual in accordance with Clause 26 that is acceptable to the Department of Air Transport; and

(4) Having a quality control manual under Clause 28 that is acceptable to the Department of Air Transport.

(b) The main certified repair station and the satellite repair station that is under the managerial control of the main repair station may share personnel and equipment. However, inspection

personnel shall be designated for each satellite repair station and available at the satellite repair station any time a determination of airworthiness or return to service is made. In other circumstances, inspection personnel may be away from the premises but shall be available by telephone, radio, or other electronic means.

(c) The satellite repair station may only be located within the country.

Clause 16 Conditions relating to Equipment, Materials and Data Requirements

A certified repair station operator shall proceed on the equipment, materials and data requirements as follows:

(a) There shall be equipment, tools, and materials necessary to perform the maintenance, preventive maintenance, or alterations in accordance with the Rating specified in the Repair Station Certificate and in accordance with the Notification of the Department of Air Transport relating to Maintenance, Preventive Maintenance, Restoration and Alteration. The equipment, tools, and material shall be located on the building and under the repair station's control when such repair work is being done.

(b) Taking care of all testing and inspection equipment and tools used to ensure airworthiness of Article and that Article is calibrated to a standard acceptable to the Department of Air Transport.

(c) The equipment, tools, and material shall be those recommended by the manufacturer of the Article or shall be at least equivalent to those recommended by the manufacturer and acceptable to the Department of Air Transport.

(d) Maintaining documents and data required for the performance of maintenance, preventive maintenance, or alterations under its Repair Station Certificate and operations specifications in accordance with the Notification of the Department of Air Transport relating to Maintenance, Preventive Maintenance, Restoration and Alteration. The following documents and data shall be updated and accessible when the relevant work is being done:

(1) Airworthiness directives;

(2) Instructions for continued airworthiness;

(3) Maintenance manuals;

(4) Overhaul manuals;

(5) Standard practice manuals;

(6) Service bulletins; and

(7) Other data that is acceptable by the Department of Air Transport.

Chapter 4

Personnel

Clause 17 Requirements relating to Personnel

The certified repair station operator shall comply with the personnel requirements as follows:

(a) Designate a repair station employee as the manager with highest responsibilities;

(b) Recruit a qualified personnel to plan, supervise, perform, and approve for return to perform the maintenance, preventive maintenance, or alterations as specified in the Repair Station Certificate and operations specifications.

(c) Recruit sufficient number of employees and provide training or knowledge and experience in the performance of maintenance, preventive maintenance, or alterations as specified in rating in the Repair Station Certificate and in accordance with the Notification of the Department of Air Transport relating to Maintenance, Preventive Maintenance, Restoration and Alteration.

(d) Determine the abilities of its non-certified ground engineers performing maintenance functions based on training, knowledge, experience, or practical tests.

Clause 18 Supervisory Personnel Requirements

The certified repair station operator shall proceed on supervisory personnel requirements as follows:

(a) Recruit sufficient number of supervisors to direct the work performed in accordance with the Repair Station Certificate and operations specifications. The supervisors shall 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.

(b) The supervisors shall be of the following age and possess the following qualifications:

(1) be at least 22 years of age and holding an aircraft maintenance engineer license issued by the Department of Air Transportation or the State where the repair station is located, or has the knowledge, experience skills equivalent to those holding an aircraft maintenance engineer license.

(2) has a minimum of 18 months of practical experience in the work being performed or have been trained in or thoroughly familiar with the methods, techniques, practices, aids, equipment, and tools used to perform the maintenance, preventive maintenance or alterations.

(3) Have the competency in reading, writing and understanding English.

Clause 19 Inspection Personnel Requirements

The certified repair station operator shall comply with inspection personnel requirements as follows:

(a) procure inspection personnel in accordance with the rating specified in the Repair Station Certifiacte;

(b) The inspection personnel shall possess the following qualifications:

(1) Have the knowledge of the Air Navigation Act B.E. 2497, laws, rules, regulations, directives and notifications related to the work being performed, including; the airworthiness directive issued by the Department of Air Transport, the state of design, maintenance advice and service by the manufacturer, inspection methods, techniques, practices, aids, equipment, and tools used to determine the airworthiness of the Article on which maintenance, preventive maintenance, or alterations are being performed;

(2) Proficient in using the various types of inspection equipment and visual inspection aids appropriate for the Article being inspected;

(3) Has competency in reading, writing and understanding English.

Clause 20 Personnel Authorized to Approve an Article for Return to Service

The certified repair station operator shall comply in relation to the approval of an Article for return to service, as follows:

(a) Ensure that there are personnel authorized to approve an Article for return to service according to the ratings specified in the Repair Station Certificate;

(b) The personnel authorized to approve an Article for return to service shall be of the following age and possess the following qualifications:

(1) Be at least 22 years of age and shall hold an aircraft maintenance engineer license issued by the Department of Air Transportation or the State which the repair station is located, or has the knowledge, experience skills equivalent to those holding an aircraft maintenance engineer license.

(2) Have a minimum of 18 months of practical experience in the work being performed with the methods, techniques, practices, aids, equipment, and tools used to perform the maintenance, preventive maintenance, or alterations.

(3) Have the knowledge in the Air Navigation Act B.E. 2497, laws, rules, regulations, directives and notifications related to the work being performed. Including; the airworthiness directive issued by the Department of Air Transport, the state of design, maintenance advice and service by the manufacturer, inspection methods, techniques, practices, aids, equipment, and tools appropriate for the work being performed and approved for return to service.

(4) Have the competency in reading, writing and understanding English.

However, the personnel of the repair station that is authorized to approve the complete aircraft for return to service shall hold an aircraft maintenance engineer license with suitable rating issued by the aircraft maintenance engineer license issued by the Department of Air Transportation or the State responsible for the repair station.

Clause 21 Records of Management, Supervisory and Inspection Personnel

The certified repair station operator shall record the profile of the management, supervisory and inspection personnel as follows:

(a) Must make and maintain the following, in a format acceptable to the Department of Air Transport:

(1) A roster of management and supervisory personnel that includes the names of the repair station officials who are responsible for its management and the names of its supervisors who oversee maintenance functions;

(2) A roster with the names of all inspection personnel;

(3) A roster of with names of personnel authorized to sign a maintenance release for approving a maintained or altered Article for return to service; and

(4) A summary of the employment of each personnel whose name is on the roster (1) to (3), shall consist of:

(4.1) Present title;

(4.2) Total years of experience and the type of maintenance work performed;

(4.3) Past relevant employment with names of employers and periods of employment;

(4.4) Scope of present employment;

(4.5) The type of mechanic or repairman certificate held and the ratings on that certificate, if applicable;

(b) When there are changes to the rosters relevant to the termination, reassignment, change in duties or addition of personnel, the certified repair station operator shall revise the roster within 5 working days.

Clause 22 Training Requirements

The certified repair station operator shall comply with the training requirements as follows:

(a) prepare and submit a training program to the Department of Air Transport for approval. The training program shall include initial training and recurring training;

(b) The training program shall ensure that each employee assigned to perform maintenance, preventive maintenance, or alterations, and inspection functions is capable of performing the assigned task;

(c) prepare individual training profile for each personnel that has undergone training according to the training program. These training records shall be retained for a minimum of 2 years; and

(d) The revised training program shall be submitted to the Department of Air Transport according to the procedures specified in the repair station manual.

Chapter 5

Operating Rules

Clause 23 Privileges and Limitations of Certificates

The certified repair station operator shall have the following privileges and limitations:

(a) The certified repair station operator have the following privileges:

(1) Perform maintenance, preventive maintenance, or alterations on any Article for which it is rated and within the limitations in its operations specification, in accordance with the Notification of the Department of Air Transport relating to Maintenance, Preventive Maintenance, Restoration and Alteration.

(2) Arrange for another person to perform the maintenance, preventive maintenance, or alterations of any Article for which the certified repair station is rated. If that person does not hold a Repair Station Certificate, the certified repair station shall ensure that the non-certified personnel follows a quality control system equivalent to the system followed by the certified repair station.

(3) Approve for return to service any Article for which it is rated after it has performed maintenance, preventive maintenance, or an alteration in accordance with the Notification of the Department of Air Transport relating to Maintenance, Preventive Maintenance, Restoration and Alteration.

(b) Must not conduct maintenance or alteration on any Article for which they are not rated for, and shall not conduct maintenance or alternation on any Article for which it is rated for but requires special technical data, equipment, or facilities that are not available to it at the time.

(c) The certified repair station operator shall:

(1) Must not approve any Article for return to service unless the maintenance, preventive maintenance, or alteration was performed in accordance with the approved technical data or data acceptable to the Department of Air Transport.

(2) Must not approve any Article for return to service after a major repair or major alteration unless the major repair or major alteration was performed in accordance with the approved technical data.

(3) Must not approve any experimental aircraft for return to service after a major repair or major alteration performed following the Notification of the Department of Air Transport relating to Maintenance, Preventive maintenance, Restoration and Alteration. Unless the major repair or major alteration was performed in accordance with methods and technical data acceptable to the Department of Air Transport.

Clause 24 Work Performed at Another Location

The certified repair station operator may temporarily transport material, equipment, and personnel needed to perform maintenance, preventive maintenance, alterations, or certain specialized services on an Article for which it is rated to a place other than the repair station's fixed location if the following requirements are met:

(a) The Department of Air Transport has determined that the work is necessary due to special circumstances.

(b) It is necessary to perform such work on a recurring basis, and the repair station's manual includes the procedures for accomplishing maintenance, preventive maintenance, alterations, or specialized services at another location.

Clause 25. Maintenance, Preventive Maintenance and Alterations Performed for Air Operator Certificate Holder

The certified repair station operator that performs maintenance, preventive maintenance and alterations for an air operator certificate holder shall comply with the following:

(a) Must follow the air operator’s maintenance program and relevant sections in the maintenance manual.

(b) Notwithstanding the building requirement of Clause 13 the Department of Air Transport may allow the certified repair station operator to perform Line Maintenance for an air operator under the following conditions:

(1) The certified repair station operator performs such Line Maintenance in accordance with the air operator's manual, if applicable, and approved maintenance program; and

(2) The certified repair station operator has the necessary equipment, trained personnel, and technical data to perform such Line Maintenance.

Clause 26 Repair Station Manual

The certified repair station operator comply with the requirements relating to the repair station manual as follows:

(a) Prepare and follow a repair station manual acceptable to the Department of Air Transport;

(b) Maintain a current repair station manual;

(c) Repair station personnel shall be able to access the repair station manual;

(d) Deliver the current repair station manual to the Department of Air Transport;

(e) When there is revision, the revised section shall be delivered to the Department of Air Transport.

Clause 27 Repair Station Manual Contents

The certified repair station operator shall at least include in the repair station manual the following items:

(a) The repair station's safety and quality policy;

(b) Organization chart showing:

(1) Each management position with authority to act on behalf of the repair station;

(2) The area of responsibility assigned to each management position;

(3) The duties, responsibilities, and authority of each management position.

(c) Procedures for maintaining and revising the rosters in Clause 20.

(d) Description of the authorized scope of work;

(e) Description of the repair station operations including the building, facilities, equipment and materials;

(f) Procedures for:

(1) The revision of the capability list and notification of the revision to the Department of Air Transport

(2) Self-evaluation on the procedures of revising the capability list, including methods and frequency of such evaluations, and procedures for reporting the results to the appropriate manager for review and action;

(g) Procedures for revising the training program required and submitting revisions to the Department of Air Transport.

(h) Procedures for the work performed at another location;

(i) Procedures for maintenance, preventive maintenance, or alterations;

(j) Procedures for:

(1) Maintaining and revising the maintenance contract information following Clause 31 (2) (2.1) and notification of the revision to the Department of Air Transport.

(2) Maintaining and revising the maintenance contract information following Clause 31 (2) (2.2) and notification of the revision to the Department of Air Transport.

(3) A description of the required records and the recordkeeping system used to obtain, store, and retrieve the required records.

(k) Procedures for revising the repair station's manual and notification of revision to the Department of Air Transport.

(l) Description of the system used to identify and control sections of the repair station manual.

Clause 28 Quality Control System

The certified repair station operator shall establish a quality control system as follows:

(a) Establish and maintain a quality control system acceptable to the Department of Air Transport that ensures the airworthiness of the Articles on which the repair station or any of its contractors performs maintenance, preventive maintenance, or alterations.

(b) Repair station personnel shall follow the quality control system when performing maintenance, preventive maintenance, or alterations in accordance with the repair station ratings.

(c) Prepare and keep current a quality control manual that includes the following:

(1) A description of the system and procedures used for:

(1.1) Inspecting incoming raw materials to ensure acceptable quality;

(1.2) Inspecting authenticity and serviceability of aircraft parts;

(1.3) Performing preliminary inspection of all Articles that are maintained;

(1.4) Inspecting all Articles that have been involved in an accident for hidden damage before maintenance, preventive maintenance, or alteration is performed;

(1.5) Establishing and maintaining proficiency of inspection personnel;

(1.6) Establishing and maintaining current technical data for maintaining Articles;

(1.7) Specify the selection qualification and surveilling non-certified persons who perform maintenance, prevention maintenance, or alterations for the repair station

(1.8) Performing final inspection and return to service of maintained Articles;

(1.9) Calibrating measuring and test equipment used in maintaining Articles, including the intervals at which the equipment will be calibrated;

(1.10) Taking corrective action on deficiencies.

(2) Refer to the manufacturer's inspection standards for a specific Articles (if any), including reference to any data specified by that manufacturer.

(3) A sample of the inspection and maintenance forms and instructions for completing such forms or a reference to a separate forms manual.

(4) Procedures for revising the quality control manual and notification to the Department of Air Transport.

(d) When there are revisions to the quality control manual, the certified repair station operator shall notify the Department of Air Transport.

Clause 29 Inspection of Maintenance Preventive Maintenance, or Alterations

The certified repair station operator shall comply with the following requirements relating to the inspection of maintenance preventive maintenance, or alterations as follow:

(a) Inspect the Article upon which it has performed maintenance, preventive maintenance, or alterations as described in (b) and (c) before approving that Article for return to service.

(b) Certify on an Article's maintenance document that the Article has undergone maintenance, preventive maintenance, or alterations is airworthy, following the approval letter of airworthiness for return to service as attached in the annex, after:

(1) The repair station performs work on the Article;

(2) An inspector inspects the Article on which the repair station has performed work and determines it to be airworthy with respect to the work performed.

(c) For the purposes of (a) and (b) in this Clause, an inspector shall have the qualifications specified in Clause 19.

Clause 30 Reporting of Capability List

The certified repair station operator shall report on the capability list as follows:

(a) A certified repair station with a limited rating may perform maintenance, preventive maintenance, or alterations on an Article if the Article is listed on a current capability list acceptable to the Department of Air Transport or on the repair station's operations specifications.

(b) The capability list shall identify each Article by make and model or other nomenclature designated by the Article's manufacturer and be available for inspection by the Department of Air Transport at all times.

(c) An Article may be listed on the capability list only if the Article is within the scope of the ratings of the repair station certificate, and only after the repair station has performed a self-evaluation in accordance with the procedures following Clause 27 (f) (2). The repair station shall perform this self-evaluation to determine that the repair station has all of the building, facilities, equipment, material, technical data, processes, and trained personnel in place to perform the work on the Article as specified in this Notification. The repair station shall retain the documentation of the evaluation for inspection.

(d) When there is a listing of additional Articles on its capability list, the repair station shall provide its copy of the revised list to the Department of Air Transport according to procedures in Clause 27 (f) (1).

Clause 31 Contract Maintenance

The certified repair station operator shall comply with in relation to contract maintenance as follows:

(a) A certified repair station operator may contract an outside party to jointly conduct maintenance function on an Article under the these conditions:

(1) The work contracted to the outside party shall be approved by the Department of Air Transport; and

(2) The repair station submits the following information to the Department of Air Transport:

(2.1) The maintenance functions contracted to each outside party;

(2.2) The name, the work perform and the certificate and rating of the outside party (if applicable);

(b) A certified repair station may contract a maintenance function pertaining to an Article to a non-certified person under these conditions:

(1) The non-certified person follows a quality control system equivalent to the system followed by the certified repair station operator

(2) The certified repair station remains directly in charge of the work performed by the non-certified person

(3) The certified repair station verifies by test and/or inspection that the work performed by the non- certified person and verifies airworthiness before approving for return to service.

(c) The certified repair station may not approve an Article with the certification type of return to service by referring to maintenance, preventive maintenance, or alterations contract.

Clause 32 Recordkeeping

The certified repair station operator shall comply with recordkeeping requirements as follows:

(a) Retain records that demonstrate compliance with the requirements of the Notification of the Department of Air Transport relating to Maintenance, Preventive Maintenance, Restoration and Alteration.

(b) Provide a copy of the maintenance document of the Article that has undergone maintenance, preventive maintenance, or alteration to the owner or possessor of the Article or the air operator.

(c) Retain the records required by this Clause for at least 2 years from the date that the Article was approved for return to service.

(d) Prepare all required records for inspection by the Department of Air Transport.

Clause 33 Report of Failures, Malfunctions, or Defects

The certified repair station operator shall comply with the reporting of failures, malfunctions, or defects as follows:

(a) Report to the Department of Air Transport within 96 hours after it discovers failure, malfunction, or defect of an Article. The report shall be in accordance with the form approved by the Department of Air Transport.

(b) Report following (a) by including the following information:

(1) Aircraft registration number;

(2) Type, make, and model of the Article;

(3) Date of the discovery of the failure, malfunction, or defect;

(4) Nature of the failure, malfunction, or defect;

(5) Time since last overhaul, if applicable;

(6) Apparent cause of the failure, malfunction, or defect; and

(7) Other relevant information that identifies the seriousness or corrective action in detail.

(c) Air operator certificate holder that already provided a report on a failure, malfunction, and defects following the procedures as specified in the general maintenance manual to the Department of Air Transport is not required to provide a report under this Clause.

Clause 34 Quality Audit System

Certified repair station operators shall provide a quality audit system, including an independent audit to monitor the workmanship and operations according to the procedures. This is to make certain that there is good maintenance operations and that the aircraft along with the aircraft components are of airworthiness. In the independent inspection, of the quality audit system, the certified repair station operator may contract other repair station that has been certified by the Department of Air Transport or an experienced auditor certified by the Department of Air Transport to conduct the audit. In the monitoring operation there shall be feedback to the Accountable Manger for corrections if there are any deficiencies. The system as such shall be approved by the Department of Air Transport.

Clause 35 Audit

A certified repair station operator shall comply with the audit as follows:

(a) Allowing the Officials to enter the location to audit that the certified repair station operator has maintained standard of operation efficiently. The audit will cover the inspection system of the repair station, recordkeeping and general capabilities that shall comply to this Notification in accordance with Clause 66 (2) of the Air Navigation Act B.E. 2497. The repair station shall clarify the reasons, the facts or relevant documents and also facilitate the Officials as necessary. After the audit, if there are any deficiencies the repair station will be notified in writing so that corrections can be made according to the list and within the specified duration.

(b) Must not use a non-certified person to perform maintenance on the Article unless there has been a notification to and the contract has been delivered to the Department of Air Transport and the Department of Air Transport has been allowed to inspect and observe the performance of the non-certified person.

(c) certified repair station operator may not contract a non-certified person to perform return to service if the non-certified person does not allow the Department of Air Transport to inspect it in accordance with (b).

Clause 36 Safety Management System –SMS

A certified repair station operator shall comply with safety management system n accordance with the specified standard as follows:

(a) Provide a safety management system by making it a part of the repair station manual.

(b) The safety management system shall follow the following procedures:

(1) Planning:

(1.1) Planning to review and consolidate all existing safety unit in the organization, including the consideration to establish a new management unit.

(1.2) Planning on safety assessment to find the cause of the mistake impact including the frequency of incidents.

(1.3) Determination of safety performance indicators and safety targets by consideration of the size, complexity, type of operation and resources of the organization.

(1.4) Planning on safety strategy to achieve the specified targets.

(1.5) Showing of operation plan in tangible format by specifying operation procedures and duration to achieve the safety targets.

(2) The executives or equivalent in the organization shall consider as binding to provide a safety management system by:

(2.1) Approve safety policy and give priority to safety in aircraft maintenance operations. Such policy shall be generally acknowledged in the organization and shows clear support on personnel and budget to provide a suitable safety management system for the organization at all times.

(2.2) Determines the objectives in providing safety management system showing that there will be consistent adjustments on safety levels. By having evaluation and reduction of risk on safety, promote personnel to report about safety freely and without punishment. Including determining responsibilities of the managerial and operational level in the safety management system.

(3) Organization structure shall provide:

(3.1) Appoint a safety manager (SM) that directly reports to the organization's executives. The executives have the authority to fully support the safety management system of the organization.

(3.2) Provide a management chart for the flexibility in the safety management system.

(3.3) Distinctively determine the roles and responsibilities of the safety manager or other relevant person in the organization.

(3.4) Establish a committee to regulate safety in the organization.

(3.5) Recruit knowledgeable and skillful personnel to manage safety which includes organizing safety training for the selected personnel consistently.

(4) Identify dangerous situations, which the general procedures for identification of dangerous situation may be reactive, proactive and predictive. However, there shall be systematic data storage, analysis and dissemination of analysis.

(5) Risk management shall provide procedures in inspection and risk reduction to meet the safety levels of the organization.

(6) Capabilities in investigating about the organization's safety. By providing that there shall be a safety investigation process to find the cause. Which requires learning, research and insights of the different factors of the cause for the safety in the organization.

(7) Capabilities in safety analysis. By providing that there shall be support to seek for methods of storing the monitored data. So the data can be used for analysis and of corrective actions and correct practice presented to the organization's executives.

(8) The promotion, support and training of safety. By providing that there shall be a training program for each personnel, so that the personnel has adequate knowledge and skills to operate according to the safety management system. There shall be also be a training program for the organization's executives. Apart from this, public relations shall be provided, on activities related to the safety management system and knowledge on safety, for the understanding and promotion of personnel safety awareness.

(9) Document management and storage of safety data. By providing data storage system of the safety management system, for which the data shall be up to date. The document system shall be able to communication about safety management, generally within the organization.

(10) Monitoring and evaluation, to monitor safety operations within the organization and evaluate risk control measures. The safety monitoring and evaluation system consists of reporting, inspection, analysis, or survey. A safety assurance system shall be provided to control risks.

(11) Emergency plan, by providing an emergency plan with systematic and efficient process until the return to normal state. There shall be an assignment of the unit with authority and responsibility.

Clause 37 The certified repair station operator shall provide the safety management system as specified in Clause 36 within 1 January B.E. 2552 onwards.

Clause 38 Repair Station Certificate issued to repair stations under the Notification of the Department of Air Transport relating to Certification of Repair Station dated 31 March B.E. 2551 shall be used until expiration of the certificate.

Henceforth.

Issued on 1 July B.E. 2551

(Chaisak Angkasuwan)

Director-General of the Department of Air Transport

Annex A

List of Work

According to the Notification of the Department of Air Transport relating to Certification of Repair Station

(a) Applicant for airframe rating class 1,2,3, or 4 shall provide equipment and material necessary for performing the following job functions efficiently:

(1) Steel structural components:

- Repair or replace steel tubes and fittings using correct and proper welding techniques
- Anti-corrosion treatment of the interior and exterior of steel parts
- Metal plating or anodizing*
- Simple machine operations, such as making bushings, bolts, etc.
- Complex machine operations, involving the use of planers, shapers, milling machines, etc.*
- Fabricate steel fittings
- Abrasive air blasting and chemical cleaning operations*
- Treatment of steel with hot and cold temperature to achieve the needed characteristic*
- Magnetic inspection*
- Repair or restore metal tanks*

(2) Wood structure:

- Splice wooden spars
- Repair ribs and spars (wood)
- Fabricate wood spars*
- Repair or replace metal ribs
- Interior alignment of wings
- Repair or replace plywood skin
- Treatment against wood decay

(3) Alloy skin and structural components:

- Repair and replace metal skin by using power tools and equipment
- Repair and replace alloy members and components such as tubes, channels, cowlings, fittings, attach angles, etc.
- Alignment of components using jigs or fixtures as in the case of joining fuselage sections or other similar operations
- Make up wooden forming blocks
- Inspection of alloy components using fluorescent light *
- Fabricate alloy members and components such as tubes, channels, cowlings, fittings, attach angles, etc.*

(4) Fabric covering:

- Repair of fabric surfaces
- Changing and refurbishing of components and the entire aircraft*

(5) Control systems:

- Changing of new control cables, using swaging and splicing techniques
- Rigging of the whole control system cable
- Renewing or repairing all control system hinge point components such as pins, bushings, etc.
- Install control system units and components.

(6) Landing gear systems:

- Renew or repair all landing gear hinge point components and attachments such as bolts, bushings, fittings, etc.
- Overhaul and repair elastic shock absorber units
- Overhaul and repair shock absorber units that uses oil-air*
- Overhaul and repair brake system components*
- Conduct landing gear retraction process tests
- Overhaul and repair electrical circuits

- Overhaul and repair hydraulic system components
- Repair or fabricate hydraulic lines

(7) Electric wiring systems:

- Diagnose malfunctions
- Repair and replace electrical cables
- Installation of electrical equipment
- Check of electrical equipment's before installation (this check is not to be mixed with the more complex functional test after overhaul).

(8) Assembly operations:

- Assembly of airframe component parts such as landing gear, wings, controls, etc.
- Rigging and alignment of airframe components, including the complete aircraft and control system
- Installation of powerplants
- Installation of instruments and accessories
- Assembly and fitting of cowling, fairings, etc.
- Repair and assembly of plastic components such as front windshields, windows, etc.
- Jack or hoist the whole aircraft
- Conduct aircraft weight and balance operations (this function will be conducted in wind free area)*
- Balance control surfaces

(b) An applicant for any class of powerplant rating shall provide equipment and material necessary for performing the following job functions efficiently and appropriate to the class rating applied for:

(1) Class 1 and 2

(1.1) Maintain and alter powerplants, including replacement of parts:

- Cleaning by chemical and mechanical methods

- Disassembly operations
- Replacement of valve guides and seats *
- Replacement of bushings, bearings, pins, inserts, etc.
- Plating operations (copper, silver, cadmium, etc.) *
- Heating operations (involving the use of recommended techniques requiring controlled heating facilities)
- Chilling or shrinking operations
- Removal and replacement of studs
- Inscribing or attachment of identification tags
- Painting of powerplants and components
- Anticorrosion treatment for parts
- Replacement and repair of powerplant alloy sheet metal and steel components such as baffles, fitting etc.

(1.2) Inspect all parts, using appropriate inspection aids:

- Magnetic, fluorescent and other acceptable inspection aids*
- Precise determination of clearances and tolerances of all parts
- Inspection for alignment of connecting rods, crankshafts, impeller shafts, etc.
- Balancing of parts, including crankshafts, impellers, etc.*
- Inspection of valve springs

(1.3) Accomplish routine machine work:

- Precision grinding, honing and lapping operations (includes crankshaft, cylinder barrels, etc.) *
- Precision drilling, tapping, boring, milling and cutting operations*
- Reaming of inserts, bushings, bearings and other similar components
- Prefacing of valves

(1.4) Perform assembly operations:

- Valve and ignition timing operations

- Fabricate and test ignition harnesses
- Fabricate and test rigid and flexible fluid lines
- Prepare engines for long or short-term storage
- Functional check powerplant accessories (this check is not to be confused with the more complex performance test of overhaul)*
- Hoist engines by mechanical means
- Install engines in aircraft*
- Align and adjust engine controls*
- Installation of powerplants in aircraft and alignment and adjustment of engine controls, after completion it shall be inspected by a certified mechanic. Persons supervising or inspecting these functions shall thoroughly understand the details related to the installation

(1.5) Test overhauled powerplants following the manufacturers' recommendations

- The test equipment shall be the same as recommended by the engine's manufacturer or equivalent equipment that will accomplish the same results. The testing function may be performed by the repair station, or may be contracted to another parties. In either case the repair station shall be responsible for the final approval of the tested engine.

(2) Class 3

Operational requirements for the work and equipment for turbine engines shall be governed entirely by the recommendations of the manufacturer, including techniques, inspection methods, and test.

(c) An applicant for any class of propeller rating shall provide equipment and material necessary for performing the following job function efficiently and appropriate to the class of rating applied for:

(1) Class 1

(1.1) Maintain and alter propellers, including installation and replacement of parts, includes:

- Replace propeller blade tips

- Refinish wood propellers
- Make wood inlays
- Refinish plastic propeller blades
- Straighten bent blades within repairable tolerances
- Modify blade diameter and profile
- Polish and buff
- Painting operations
- Remove and reinstall of powerplants

(1.2) Inspect components, using appropriate inspection aids, including:

- Inspect propellers for compliance with manufacturer's drawings and specifications;
- Inspect hubs and propeller blades for failures and defects, using magnetic or fluorescent light inspection devices*
- Inspect hubs and blades for failures and defects, using all visual aids, including the etching of parts
- Inspect hubs for wear of splines or keyways or any other defect

(1.3) Repair or replace components (that were not specified in this class)

(1.4) Balance of propellers:

- Test to find proper propeller track on aircraft
- Test for horizontal and vertical unbalance (this test shall be completed with the use of precision equipment)

(1.5) Test propeller pitch changing mechanisms: (That were not determine in this class)

(2) Class 2

(2.1) Maintain and alter propellers, including installation and the replacement of parts, following all listed work under (c) (1) (1.1) of this appendix when applicable to the make and model of propeller, for which a rating is sought

- Properly lubricate moving parts
- Assembly of whole propeller and subassemblies, using special tools when required

(2.2) Inspect components, using appropriate inspection aids following all listed work under (c) (1) (1.2) of this appendix when applicable to the make and model propeller for which a rating is sought.

(2.3) Repair or replace component parts, including:

- Replace blades, hubs, or any of their components
- Repair or replace anti-icing devices
- Remove nicks or scratches from metal blades
- Repair or replace electrical components of the propeller

(2.4) Balance of propellers: All listed work under (c) (1) (1.4) of this appendix when applicable to the make and model propeller for which a rating is sought.

(2.5) Test propeller pitch changing mechanism, including:

- Test hydraulic which operates with propellers and components
- Test electricity which operates with propellers and components
- Test of device controlling constant speed*

(d) An applicant for a radio rating shall provide equipment and materials as follows:

(1) For radio rating class 1 (Communications), the equipment and materials necessary for performing the job function listed in (d) (4) of this appendix and the following work:

- The testing and repair of headsets, speakers, and microphones
- The measuring of radio transmitter power output

(2) For radio rating class 2 (Navigation), the equipment and materials necessary for performing the job function listed in (d) (4) of this appendix and the following work:

- The testing and repair of headsets
- The testing of speakers

- The repair of speakers.*
- The measuring of loop antenna sensitivity by appropriate methods
- The determination and compensation for quadrant error in the aircraft's direction finder equipment by radio
- The calibration of any radio navigational equipment, en route and approach aids, or similar equipment, appropriate to this rating to approved performance standards

(3) For radio rating class 3 (Radar), the equipment and materials necessary for performing the job function listed in (d) (4) of this appendix and the following work:

- The measuring of radio transmitter power output
- The metal plating of transmission lines, wave guides, and similar equipment in accordance with appropriate specifications.*
- The pressurization appropriate to radar equipment with dry air, nitrogen, or other specified gases

(4) For all classes of radio ratings, the equipment and materials necessary for performing the job function as follow:

- Perform physical inspection of radio systems and components by visual and mechanical methods
- Perform electrical inspection of radio systems and components by means of appropriate electrical and/or electronic test instruments
- Check aircraft electrical wiring, antennas, connectors, relays, and other radio components relevant to detect installation faults
- Check engine ignition systems and aircraft accessories to determine sources of electrical interference
- Check aircraft power supplies for adequacy and proper functioning
- Test radio instruments*
- Overhaul, test, and check dynamotors, inverters, and other radio electrical apparatus*
- Paint and refinish equipment containers*

- Accomplish appropriate methods of marking calibrations, or other information on radio control panels and other components, as required*
- Make and reproduce drawings, wiring diagrams, and other similar material required to record alterations and/or modifications to radio (photographs may be used instead of drawings when they are found to be an equivalent or better means of recording)*
- Fabricate tuning shaft assemblies, brackets, cable assemblies, and other similar components used in radio or aircraft radio installations.*
- Align tuned circuits (RF and IF)
- Install and repair aircraft antennas
- Install complete radio systems in aircraft and prepare weight and balance reports* (Radio installation requiring alterations to the aircraft structure shall be performed, supervised, and inspected by qualified personnel)
- Measure modulation values, noise, and distortion in radio
- Measure audio and radio frequencies to appropriate tolerances and perform calibration necessary for the proper operation of radios
- Measure radio component values including: inductance, capacitance, resistance, etc.
- Measure size of radio frequency transmission
- Determine wave forms and phase in radios when applicable
- Determine proper aircraft radio antenna, leading and transmission line characteristics and locations for type of radio equipment to which connected
- Determine operational condition of radio equipment installed in aircraft by using appropriate portable test apparatus
- Determine proper location for radio antennas on aircraft
- Test all types of electronic tubes, transistors, or similar devices in equipment appropriate to the rating

(e) An applicant for any class of instrument rating shall provide equipment and material necessary for performing the following job functions, in accordance with pertinent specifications and manufacturers' recommendations, appropriate to the class of rating applied for:

(1) Class 1

(1.1) Diagnose instrument malfunctions by diagnosing the malfunctioning of the following instruments:

- Rate of climb indicators
- Altimeters
- Air speed indicators
- Vacuum indicators
- Oil pressure gauges
- Fuel pressure gauges
- Hydraulic pressure gauges
- Deicing pressure gauges
- Pilot/static tube
- Direct indicating magnetic compasses
- Accelerometer
- Direct indicating tachometers
- Direct reading fuel quantity gauges
- Optical (sextants, drift sights, etc.)*

(1.2) Maintain and alter instruments, including installation and replacement of parts, by:

- Perform these functions on instruments listed under (e) (1) (1.1) of this appendix
- Installation includes fabrication of instrument panels and other installation structural components. The repair station shall be equipped to perform this function. However, it may be contracted to other equipped repair station

(1.3) Inspect, test and calibrate instruments by performing these functions on instruments listed under (e) (1) (1.1) of this appendix, on and off the aircraft, as appropriate

(2) Class 2

(2.1) Diagnose instrument malfunctions by diagnose the malfunctioning of the following instruments:

- Tachometers
- Synchro scope
- Electric temperature indicators
- Electric resistance type indicators
- Moving magnet type indicators
- Resistance type fuel indicators
- Warning units (oil/fuel)
- Selwyn systems and indicators
- Self-synchronous systems and indicators
- Remote indicating compasses
- Fuel quantity indicators
- Oil quantity indicators
- Radio indicators
- Ammeters
- Voltmeters

(2.2) Maintain and alter instruments, including installation and the replacement of parts, by:

- Perform these functions on instruments listed under (e) (2) (2.1) of this appendix
- Installation includes fabrication of instrument panels and other installation structural components. The repair station shall be equipped to perform this function. However, it may be contracted to other equipped repair station

(2.3) Inspect, test and calibrate instruments: Perform these work on instruments listed under (e) (2) (2.1) of this appendix, on and off the aircraft, as appropriate

(3) Class 3

(3.1) Diagnose instrument malfunctions by diagnose malfunctioning of the following instruments:

- Turn and bank indicators
- Directional gyros
- Horizon gyros
- Auto pilot control units and components*
- Remote reading direction indicators*

(3.2) Maintain and alter instruments, including installation and replacement of parts, by:

- Perform these work on instruments listed under (e) (3) (3.1) of this appendix.
- Installation includes fabrication of instrument panels and other installation structural components. The repair station shall be equipped to perform this function. However, it may be contracted to other equipped repair station

(3.3) Inspect, test and calibrate instruments by performing these functions on instruments listed under (e) (3) (3.1) of this appendix, on and off the aircraft, as appropriate.

(4) Class 4

(4.1) Diagnose instrument malfunctions by diagnose malfunctioning of the following instruments:

- Capacitance type quantity gauge
- Other electronic instruments
- Engine analyzers

(4.2) Maintain and alter instruments, including installation and replacement of parts, by:

- Perform these work on instruments listed under (e) (4) (4.1) of this appendix.

- Installation includes fabrication of instrument panels and other installation structural components. The repair station shall be equipped to perform this function. However, it may be contracted to other equipped repair stations.

(4.3) Inspect, test and calibrate instruments by performing the work on instruments listed under (e) (4) (4.1) of this appendix, on and off the aircraft, as appropriate.

(f) An applicant for accessory rating Class 1, 2, or 3 shall provide equipment and material necessary for performing the following job functions, in accordance with pertinent specifications and the manufacturers' recommendations:

(1) Diagnose accessory malfunctions

(2) Maintain and alter accessories, including installation and the replacement of the parts

(3) Inspect, test, and, where necessary, calibrate accessories

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Note: Job function with an asterisk (*)indicates that the applicant need not have the equipment and material in their building, they may contract other repair station with such equipment and material to perform the work.