

## **2.6 AIRCRAFT MAINTENANCE LICENSING, INSTRUCTORS AND DESIGNATED EXAMINERS**

### **2.6.1 GENERAL**

#### **2.6.1.1 APPLICABILITY**

(a) Subpart 2.6 prescribes the requirements for issuing the following licenses and associated ratings and/or authorisations for:

- (1) Aircraft Maintenance Engineers.
- (2) Inspection Authorisations
- (3) Aircraft Repair Specialist.

### **2.6.2 AIRCRAFT MAINTENANCE ENGINEER (AME)**

#### **2.6.2.1 APPLICABILITY**

(a) This Subpart prescribes the requirements for issuance of an AME license and associated ratings.

#### **2.6.2.2 ELIGIBILITY REQUIREMENTS: GENERAL**

(a) An applicant for an AME license and any associated rating shall—

- (1) Be at least 18 years of age.
- (2) Demonstrate the ability to read, write, speak, and understand the English language, by reading and explaining appropriate maintenance publications and by writing defect and repair statements.
- (3) Comply with the knowledge, experience, and competency requirements prescribed for the license and rating sought.
- (4) Pass all of the prescribed tests for the license and rating sought, within a period of 24 months.

(b) A licensed AME who applies for an additional rating must meet the requirements of 2.6.2.6 of these regulations and, within a period of 24 months, pass the tests prescribed by 2.6.2.5 and 2.6.2.7 of these regulations for the additional rating sought.

#### **2.6.2.3 RATINGS**

(a) The following ratings are issued under this subpart:

- (1) Airframe.
- (2) Powerplant.
- (3) Avionics.
- (4) Other ratings as may be determined by the Authority.

(b) The following AME type ratings are issued under the Subpart—

- (1) Airframe type ratings for aircraft with a takeoff gross weight of more than 5700 kg.
- (2) Powerplant type ratings for powerplants on aircraft with a takeoff gross weight of more than 5700 kg.
- (3) Other specialised ratings as may be determined by the Authority.

#### **2.6.2.4 KNOWLEDGE REQUIREMENTS FOR THE AME LICENSE**

(a) The applicant for an aircraft maintenance engineer license shall have pass a general knowledge test covering at least the following areas:

- (1) Air law and airworthiness requirements. Rules and regulations relevant to an aircraft maintenance engineer license holder including —
  - (i) Applicable airworthiness requirements governing certification and continuing airworthiness of aircraft ; and

- (ii) Approved aircraft maintenance organisation procedures.
- (2) Natural science and aircraft general knowledge—
  - (i) Basic mathematics;
  - (ii) Units of measurement; and
  - (iii) Fundamental principles and theory of physics and chemistry applicable to aircraft maintenance.
- (3) Aircraft engineering. Characteristics and applications of the materials of aircraft construction including—
  - (i) Principles of construction and functioning of aircraft structures,
  - (ii) Fastening techniques;
  - (iii) Powerplants and their associated systems;
  - (iv) Mechanical, fluid, electrical and electronic power sources;
  - (v) Aircraft instrument and display systems;
  - (vi) Aircraft control systems; and
  - (vii) Airborne navigation and communication systems.
- (4) Aircraft maintenance. Tasks required to ensure the continuing airworthiness of an aircraft including—
  - (i) Methods and procedures for the overhaul, repair, inspection, replacement, alteration or defect rectification of aircraft structures, components and systems in accordance with the methods prescribed in the relevant Maintenance Manuals and the applicable requirements of airworthiness.
- (5) Human performance:
  - (i) Human performance and limitations relevant to the duties of an aircraft maintenance license holder.

#### **2.6.2.5 KNOWLEDGE REQUIREMENTS FOR THE RATINGS**

(a) The applicant for an airframe rating shall pass a knowledge test covering at least the following areas:

- (1) Wood structures.
- (2) Aircraft covering.
- (3) Aircraft finishes.
- (4) Sheet metal and non-metallic structures.
- (5) Welding.
- (6) Assembly and rigging.
- (7) Airframe inspection.
- (8) Fuel systems.
- (9) Aircraft landing gear systems.
- (10) Hydraulic and pneumatic power systems.
- (11) Cabin atmosphere control systems.
- (12) Aircraft instrument systems.
- (13) Communication and navigation systems.
- (14) Aircraft fuel systems.
- (15) Aircraft electrical systems.
- (16) Position and warning systems.
- (17) Ice and rain control systems.
- (18) Fire protection systems.

(b) The applicant for a powerplant rating shall pass a knowledge test covering at least the following areas:

- (1) Reciprocating systems.
- (2) Turbine engines.
- (3) Engine inspection.

- (4) Engine instrument systems.
- (5) Engine fire protection systems.
- (6) Engine electrical systems.
- (7) Lubrication systems.
- (8) Ignition and starting systems.
- (9) Fuel metering.
- (10) Engine fuel systems.
- (11) Induction and engine airflow systems.
- (12) Engine cooling systems.
- (13) Engine exhaust and reverser systems.
- (14) Propellers.
- (15) Auxiliary power units.

(c) The applicant for an avionics rating shall pass a knowledge test covering at least the following areas:

- (1) Aircraft electrical systems;
- (2) Aircraft instrument systems;
- (3) Automatic flight control systems;
- (4) Aircraft radio and radio navigation systems,
- (5) Aircraft navigation systems; and
- (6) Aircraft systems/components – avionics.

(d) The applicant shall pass each section of the test before applying for the skill tests prescribed by 2.6.2.7.

#### **2.6.2.6 EXPERIENCE REQUIREMENTS**

(a) An applicant for an AME license and associated ratings may qualify by either practical experience or through completion of approved training in an ATO.

(b) Practical experience. Each applicant for an AME license and rating(s) relying on practical experience shall provide documentary evidence, acceptable to the Authority, of the following experience in the inspection, servicing and maintenance of aircraft or its components—

- (1) Airframe rating – 30 months.
- (2) Powerplant rating – 30 months.
- (3) Airframe and Powerplant ratings – 48 months.
- (4) Avionics rating – 36 months.
- (5) Airframe, Powerplant and Avionics ratings – 60 months.

(c) Approved Training. Each applicant for an AME license relying on completion of training in an Approved Training Organisation shall provide documentary evidence, acceptable to the Authority, of the following training:

- (1) Airframe rating – 24 months.
- (2) Powerplant rating – 24 months.
- (3) Airframe and Powerplant ratings – 30 months.
- (4) Avionics rating– 18 months in an ATO and 12 months practical work experience.
- (5) Airframe, Powerplant and Avionics ratings – 42 months in an ATO and 12 months practical work experience. The training requirements for a full aircraft maintenance engineer license, including requirements applicable to airframe and powerplant ratings, shall be complied with prior to obtaining the avionics rating.

#### **2.6.2.7 SKILL REQUIREMENTS**

(a) Each applicant for an AME license or rating must pass a skill test on the license or rating that he/she seeks. The tests cover the applicant's basic skill in performing practical projects on the subjects covered by the knowledge test for the license or rating, and shall contain at least the subjects in the Implementing Standard 2.6.2.7 appropriate to the license or rating sought.

### **2.6.2.8 PRIVILEGES AND LIMITATIONS**

(a) Except as specified in paragraphs (e) and (f) of this subsection, a licensed AME may perform or supervise the maintenance, preventive maintenance, or modification of, or after inspection, approve for return to service, any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, for which he or she is rated, provided the licensed AME has—

- (1) Satisfactorily performed the work at an earlier date;
- (2) Demonstrated the ability to perform the work to the satisfaction of the Authority;
- (3) Received training acceptable to the Authority on the tasks to be performed; or
- (4) Performed the work while working under the direct supervision of a licensed AME or a licensed aviation repair specialist who is appropriately rated and has—
  - (i) Had previous experience in the specific operation concerned; or
  - (ii) Received training acceptable to the Authority on the task to be performed.

(b) Except as specified in paragraphs (e) and (f) of this subsection, a licensed AME with an airframe rating may after he/she has performed the 100-hour inspection required by Part 8 of these Regulations on an airframe, or any related part or appliance, and approve and return it to service.

(c) Except as specified in paragraphs (e) and (f) of this subsection, a licensed AME with a powerplant rating may perform the 100-hour inspection required by Part 8 of these Regulations on a powerplant or propeller or any related part or appliance, and approve and return it to service.

(d) Except as specified in paragraph (e) of the subsection, a licensed AME with an Avionics rating may inspect, repair, maintain, function test and return to service aircraft avionics systems and components.

(e) An AME with an airframe or powerplant or avionics rating may not—

- (1) Supervise the maintenance, preventive maintenance, or modification of, or approve and return to service, any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, for which he/she is rated unless he/she has satisfactorily performed the work concerned at an earlier date.
- (2) Exercise the privileges of the license unless the licensed AME understands the current instructions for continued airworthiness and the maintenance instructions for the specific operation concerned.
- (3) Perform a major repair or major modification of a propeller.

(f) An AME with an Airframe or Powerplant rating may not:

- (1) Perform or supervise (unless under the direct supervision and control of an AOC holder that is authorised to perform maintenance, preventive maintenance, or modifications under an equivalent system in accordance with 9.4.1.3(a) of these regulations) any repair or alteration of instruments.
- (2) Approve for return to service—
  - (i) Any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof after completion of a major alteration or major repair; or
  - (ii) Any instrument after completion of any repair or alteration.

### **2.6.2.9 DURATION OF AME LICENSE**

(a) Validity. The duration of the AME license is five years.

(b) Renewal. An AME license that has not expired may be renewed for an additional 5 years if the holder presents evidence to the Authority that he/she has within the past 24 months has exercised the privileges of the license.

(c) Re-issue. Is the AME license has expired, the applicant shall have received refresher training acceptable to the Authority.

#### **2.6.2.10 RECENT EXPERIENCE REQUIREMENTS**

(a) A licensed AME may not exercise the privileges of his/her license or rating unless, within the preceding 24 months—

- (1) The Authority has found that he/she is able to do that work; or
- (2) For at least 6 months within the preceding 24 months—
  - (i) Served as an AME under his/her license and rating;
  - (ii) Technically supervised other AMEs;
  - (iii) Provided aviation maintenance instruction or served as the direct supervisor of persons providing aviation maintenance instruction for an AME course or program acceptable to the Authority;
  - (iv) Supervised the maintenance, preventive maintenance, or alteration of any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof; or
  - (v) Been engaged in any combination of paragraphs (a)(1)(i) through (a)(1)(iv) of this subsection.

#### **2.6.2.11 DISPLAY OF LICENSE**

(a) Each person who holds an AME license shall keep it within the immediate area where he/she normally exercises the privileges of the license and shall present it for inspection upon the request of the Authority or an authorised representative of the Director General, or any Federal, State, or local law enforcement officer.