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PUBLISHED BY AUTHORITY

PART C

S1

LEGAL NOTICE NO. 110 OF 2011

CIVIL AVIATION AUTHORITY ACT, 2009
(Act No. 10 of 2009)

CIVIL AVIATION AUTHORITY (APPROVED MAINTENANCE
ORGANIZATIONS) 2011
(Under Section 104)

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PART I PRELIMINARY

In exercise of the powers conferred by section 104 of the Civil Aviation Authority Act, 2009, the Minister of Public Works and Transport makes the following regulations-

Citation and commencement

1. These regulations may be cited as the Civil Aviation Authority (Approved Maintenance Organizations) Regulations, 2011, and shall come into force on the date of publication in the Gazette.

Interpretation

2. In these regulations, unless the context otherwise requires, words or expressions used in the Act have the same meaning as in these Regulations, and-

“acceptable” means the Authority has reviewed the method, procedure or policy and has neither objected to nor approved its proposed use or implementation;

“accountable manager” means the manager who has corporate authority for ensuring that all maintenance activities required by the owner or operator of an aircraft are financed and carried out to the standard required by the Authority;

“aeronautical product” means an aircraft, engine, propeller or subassembly, appliance, material, part or component to be installed thereon;

“aircraft” means a machine that derives support in the atmosphere from the reactions of the air, other than the reactions of the air against the earth’s surface;

“aircraft component” means any assembly, item, component, part of an aircraft up to and including a complete powerplant or any operational or emergency equipment;

“aircraft type” means all aircraft of the same basic design;

“airframe” means the fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of a powerplant) and landing gear of an aircraft and their accessories and controls;

“airworthiness data” means any information necessary to ensure that an aircraft or aircraft component can be maintained in a condition such that the airworthiness of the aircraft or serviceability of operational and emergency equipment, as appropriate, is assured;

“appliance” means an instrument, mechanism, equipment, part, apparatus, appurtenance or accessory, including communication equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft and is not part of an airframe, powerplant or propeller;

“approved by the Authority” means approved by the Authority directly or in accordance with a procedure approved by the Authority;

“approved continuous maintenance program” means a maintenance program approved by the State of Registry;

“approved data” means technical information approved by the Authority;

“approved maintenance organization (AMO)” means an organization approved by the Authority to perform specific aircraft maintenance activities;

“approved standard” means a manufacturing, design, maintenance, or quality standard approved by the Authority;

“article” means an item, including but not limited to, an aircraft, airframe, aircraft engine, propeller, appliance, accessory, assembly, subassembly, system, subsystem, component, unit, product or part;

“Authority” means the Civil Aviation Authority, established under the Civil Aviation Authority Act;

“calibration” means a set of operations, performed in accordance with a definite documented procedure, that compares the measurement performed by a measurement device or working standard for the purpose of detecting and reporting or eliminating by adjustment errors in the measurement device, working standard or component tested;

“certificate of release to service” means a document containing a certification that inspection and maintenance work has been performed satisfactorily in accordance with the methods prescribed by the Authority;

“certifying staff” means personnel authorized by the approved maintenance organization in accordance with a procedure acceptable to the Authority to certify aircraft or aircraft components for release to service;

“composite” means structural materials made of substances, including, but not limited to, wood, metal, ceramic, graphite, boron, epoxy, plastic, fibre-reinforced built-in strengthening agents that may be in the form of filaments, foils, powders or flakes, of a different material; “composite structure” means a type of aircraft structure made of plastic resins reinforced with strong light weight filaments;

“computer system” means any electronic or automated system capable of receiving, storing and processing external data and transmitting and presenting that data in a usable form for the accomplishment of a specific function;

“Contracting State” means a state that is signatory to the Convention on International Civil Aviation (Chicago Convention);

“facility” means a physical plant, including land, buildings and equipment, which provide the means for the performance of maintenance, preventive maintenance or modifications of any article;

“helicopter” means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axis;

“housing” means buildings, hangars and other structures to accommodate the necessary equipment and materials of a maintenance organization that provide-

- (a) working space for the performance of maintenance, preventive maintenance or modifications for which the maintenance organization is certificated and rated; and
- (b) structures for the proper protection of aircraft, airframes, aircraft engines, propellers, appliances, components, parts and subassemblies during disassembly, cleaning, inspection, repair, modification, assembly and testing; and

(c) for the proper storage, segregation and protection of materials, parts and supplies;

“inspection” means the examination of an aircraft or aircraft component to establish conformity with a standard approved by the Authority;

“maintenance” means tasks required to ensure the continued airworthiness of an aircraft or aircraft component including any one or combination of overhaul, repair, inspection, replacement, modification and defect rectification;

“major modification” means a type design change not listed in the aircraft, aircraft engine or propeller specifications that might appreciably affect the mass and balance limits, structural strength, performance, powerplant operation, flight characteristics or other qualities affecting airworthiness or environmental characteristics or that will be embodied in the product according to non-standard practices;

“major repair” means a repair of an aeronautical product that might appreciably affect the structural strength, performance, powerplant, operation flight characteristics or other qualities affecting airworthiness or environmental characteristics or that will be embodied in the product using non-standard practices;

“modification” means a change to the type design of an aircraft or aeronautical product which is not a repair;

“overhaul” means the restoration of an aircraft or aircraft component using methods, techniques and practices acceptable to the Authority, including disassembly, cleaning and inspection as permitted, repair as necessary and reassembly; and testing in accordance with approved standards and technical data or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the State of Design, holder of the type certificate, supplemental type certificate or a material, part, process or appliance approval under parts manufacturing authorization (PMA) or technical standard order (TSO).

“powerplant” means an engine that is used or intended to be used for propelling aircraft and it includes turbo, superchargers, appurtenances, and accessories necessary for its functioning, but does not include propellers;

“preventive maintenance” means simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations;

“rating” means an authorization entered on, or associated with a license or certificate and forming part thereof, stating special conditions, privileges or limitations pertaining to such license or certificate;

“specific operating provisions” means a document describing the ratings in detail and containing or referencing material and process specifications used in performing repair work, along with any limitations applied to the maintenance organization;

“state of design” means the Contracting State which approved the original type certificate and any subsequent supplemental type certificates for an aircraft, or which approved the design of an aircraft or aircraft component or appliance;

“state of manufacture” means the Contracting State, under whose authority an aircraft was assembled, approved for compliance with the type certificate and all supplemental type certificates, test flown and approved for operation; the State of Manufacture may or may not also be the State of Design;

“state of registry” means the Contracting State on whose registry an aircraft is registered.

Application

3. These Regulations shall apply to all persons operating or maintaining Swaziland registered aircraft, wherever operated or maintained.

PART II CERTIFICATION

Certificate and specific operating provisions

4. (1) No person shall operate as an approved maintenance organization (AMO) without or in violation of an approved maintenance organization certificate issued under these Regulations.

(2) An AMO may perform maintenance, preventive maintenance, or modifications on an aircraft, airframe, engine, propeller, appliance, component or its part only for which it is rated and within the limitations placed in its specific operating provisions.

(3) An AMO certificate shall consist of-

- (a) a certificate for public display issued by the Authority; and
- (b) specific operating provisions accepted by the Authority containing the terms and conditions applicable to the AMO.

(4) An AMO certificate shall contain-

- (a) a certificate number specifically assigned to the AMO;
- (b) name and location of the main place of business of the AMO;
- (c) date of issue and period of validity; and
- (d) ratings issued to the AMO.

(5) The AMO Certificate shall be in the form prescribed by the Authority.

(6) Specific operating provisions shall contain-

- (a) a certificate number specifically assigned to the AMO;
- (b) class or limited ratings issued in detail, including special approvals and limitations issued;
- (c) date issued or revised; and
- (d) signatures of the accountable manager and the Authority.

(7) The certificate issued to an AMO shall be displayed in the premises for inspection by the public and the Authority.

Advertising

5. (1) An approved maintenance organization shall not advertise as a certificated approved maintenance organization unless an approved maintenance organization certificate has been issued to that organization.

(2) An AMO shall not make any statement, either in writing or orally, about itself that is false or is designed to mislead any person.

(3) Where an advert of an AMO indicates the AMO is certificated, the advertisement shall clearly state the certificate number of the AMO.

Application for an AMO Certificate

6. An applicant for an approved maintenance organization (AMO) certificate shall submit the following to the Authority at least ninety days before the intended day of operations-

- (a) an application on a form and in a manner prescribed by the Authority;
- (b) the maintenance procedures manual of the applicant, in duplicate;
- (c) a list of the maintenance functions to be performed for it, under contract, by another AMO;
- (d) a list of all AMO certificates and ratings pertinent to those certificates issued by any Contracting State other than Swaziland; and
- (e) any additional information the Authority requires the applicant to submit.

Issue of an AMO certificate

7. An applicant shall be issued an approved maintenance organization (AMO) certificate if after inspection, the Authority finds that the applicant-

- (a) meets the requirements for the holder of an AMO specified under these Regulations; and
- (b) is properly and adequately equipped for the performance of maintenance of aircraft or aircraft components for which it seeks approval.

Validity and renewal of the certificate

8. (1) A certificate issued to an approved maintenance organization (AMO) shall be valid for twelve months from the date of issue or renewal, unless a shorter period is specified by the Authority or-

- (a) the Authority amends, suspends, revokes or otherwise terminates the certificate;
- (b) the AMO surrenders it to the Authority; or
- (c) the AMO suspends operations for more than 180 continuous days.

(2) A person issued with an AMO certificate shall, upon suspension or revocation of the certificate, return the certificate to the Authority.

(3) An application for renewal of an AMO certificate shall be made on a form prescribed by the Authority at least sixty days before the certificate expires.

(4) Where a request for renewal is made after the expiry of an AMO certificate the applicant shall meet initial application requirements provided for in regulation 10.

Continued validity of approval

9. Unless an approved maintenance organization (AMO) certificate has previously been surrendered, superseded, suspended, revoked or expired by virtue of exceeding any expiration date that may be specified in the certificate, the continued validity of the certificate is dependent upon-

- (a) the AMO remaining in compliance with these Regulations; and
- (b) the Authority being granted access to the facilities of the organization to determine continued compliance with these Regulations.

Changes to the AMO and certificate amendments

10. (1) An approved maintenance organization (AMO) shall notify the Authority of any proposal to carry out any changes to enable the Authority to determine compliance with these Regulations and to amend if necessary, the AMO certificate.

(2) An AMO shall not effect the following changes without the prior approval of the Authority-

- (a) the name of the AMO;
- (b) the location of the AMO;
- (c) additional locations of the AMO;
- (d) the accountable manager;
- (e) any of the management personnel specified in the maintenance procedural manual of the AMO;
- (f) the facilities, equipment, tools, material, procedures, work scope and certifying staff that could affect the approval; and
- (g) ratings held by the AMO.

(3) Unless the Authority determines that the approval should be suspended, the Authority may prescribe the conditions under which an AMO may operate during the changes.

(4) An AMO certificate may be suspended by the Authority if changes in items listed under sub-regulation (2) have been made by the AMO without notifying the Authority.

(5) An application for amendment of an existing AMO certificate shall be made on a form and in a manner prescribed by the Authority, and where applicable, the AMO shall submit the required amendment to the maintenance procedures manual to the Authority for approval.

Ratings of the AMO

11. The following ratings may be issued to an approved maintenance organization (AMO) certificated under these Regulations-

(a) *airframe ratings-*

- (i) class 1: composite construction of small aircraft;
- (ii) class 2: composite construction of large aircraft;
- (iii) Class3: all-metal construction of small aircraft;
- (iv) Class4: all-metal construction of large aircraft;

(b) *powerplant ratings-*

- (i) class1: reciprocating engines of 400 horsepower or less;
- (ii) class 2: reciprocating engines of more than 400 horsepower;
- (iii) class 3: turbine engines;

(c) *propeller ratings-*

- (i) class 1: all fixed pitch and ground adjustable propellers of wood, metal or composite construction;
- (ii) class 2: all other propellers, by make;

(d) *radio ratings-*

- (i) class 1: communication equipment: any radio transmitting equipment or receiving equipment, or both, used in aircraft to send or receive communications in flight, regardless of carrier frequency or type of modulation used; including auxiliary and related aircraft interphone systems, amplifier systems, electrical or electronic inter-crew signaling devices, and similar equipment; but not including equipment used for navigation of the aircraft or as an aid to navigation, equipment 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;
- (ii) class 2: navigational equipment: any radio system used in aircraft for en route or approach navigation, except equipment operated on radar or pulsed radio frequency principles, but not including equipment for measuring altitude or terrain clearance or other distance equipment operated on radar or pulsed radio frequency principles;
- (iii) class 3: radar equipment: any aircraft electronic system operated on radar or pulsed radio frequency principles;

(e) *instrument ratings-*

- (i) class 1: mechanical: any diaphragm, bourdon tube, aneroid, optical, or mechanically driven centrifugal instrument that is used on aircraft or to operate

aircraft, including tachometers, airspeed indicators, pressure gauges drift sights, magnetic compasses, altimeters, or similar mechanical instruments;

- (ii) class 2: electrical: any self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments;
- (iii) class 3: gyroscopic: 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;
- (iv) class 4: electronic: any instruments whose operation depends on electron tubes, transistors, or similar devices including capacitance type quantity gauges, system amplifiers, and engine analyzers;

(f) computer systems rating-

- (i) class 1: aircraft computer systems
- (ii) class 2: powerplant computer systems; and
- (iii) class 3: avionics computer systems;

(g) accessory ratings-

- (i) class 1: mechanical accessories that depend 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;
- (ii) class 2: electrical accessories that depend on electrical energy for their operation, and generators, including starters, voltage regulators, electric motors, electrically driven fuel pumps magnetos, or similar electrical accessories;
- (iii) class 3: electronic accessories that depend on the use of an electron tube transistor, or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls;
- (iv) class 4: auxiliary power unit (APU) that may be installed on aircraft as self-contained units to supplement the aircraft's engines as a source of hydraulic, pneumatic, or electrical power.

Limited rating to AMO

12. (1) Whenever the Authority finds it appropriate, it may issue a limited rating to an approved maintenance organization (AMO) that maintains or alters only a particular type of airframe, powerplant, propeller, radio, instrument, computer or accessory or parts of the airframe, powerplant, propeller, radio, instrument, computer or performs only specialized maintenance requiring equipment and skills not ordinarily found in an AMO with ratings as specified in regulation 8.

(2) A rating issued under sub regulation (1) may be limited to-

- (a) a specific model aircraft, engine, or constituent part or to any number of parts made by a particular manufacturer;
- (b) *airframes of a particular make and model;*
- (c) engines of a particular make and model;
- (d) propellers of a particular make and model;
- (e) instruments of a particular make and model;
- (f) computers of a particular make and model;
- (g) radio equipment of a particular make and model;
- (h) accessories of a particular make and model;
- (i) landing gear components;
- (j) floats, by make;
- (k) non-destructive inspection, testing, and processing;
- (l) emergency equipment;
- (m) rotor blades, by make and model;
- (n) aircraft fabric work; and
- (o) any other purpose for which the Authority finds the request of the applicant is appropriate.

(3) A specialized service rating may be issued to an AMO to perform specific maintenance or processes and the specific operating provisions of the AMO shall identify the specification used in performing specialized services which may be-

- (a) a civil or military specification that is currently used by industry and approved by the Authority; or
- (b) a specification developed by the AMO and approved by the Authority.

AMO capability

13. (1) Except for functions that are contracted out, each certificated approved maintenance organization (AMO) shall provide equipment and material so that the functions listed in this regulation as appropriate to the class or limited rating held or applied for, can be performed as required.

(2) For an airframe rating, classes 3 and 4-

- (a) the functions in respect to metal skin and structural components are-
 - (i) repair and replace steel tubes and fittings using the proper welding techniques, when appropriate;

- (ii) apply anticorrosion treatment to the interior and exterior of parts;
 - (iii) perform simple machine operations;
 - (iv) fabricate steel fittings;
 - (v) repair and replace metal skin;
 - (vi) repair and replace alloy members and components;
 - (vii) assemble and align components using jigs or fixtures;
 - (viii) make up forming blocks or dies; (ix) repair or replace ribs;
- (b) the functions in respect to wood structure are-
- (i) splice wood spars;
 - (ii) repair ribs and spars;
 - (iii) align interior of wings;
 - (iv) repair or replace plywood skin;
 - (v) apply treatment against wood decay;
- (c) the functions in respect to fabric covering are repair of fabric surfaces;
- (d) the functions in respect to aircraft control systems are-
- (i) repair and replace control cables;
 - (ii) rig complete control system;
 - (iii) replace and repair all control system components;
 - (iv) remove and install control system units and components.
- (e) the functions in respect to aircraft systems are-
- (i) replace and repair landing gear hinge-point components and attachments;
 - (ii) maintain elastic shock absorber units;
 - (iii) conduct landing gear retraction cycle tests;
 - (iv) maintain electrical position indicating and wiring systems;
 - (v) repair and fabricate fuel, pneumatic, hydraulic, and oil lines;
 - (vi) diagnose electrical and electronic malfunctions;
 - (vii) repair and replace electrical wiring and electronic data transmission lines;
 - (viii) install electrical and electronic equipment;

- (ix) perform bench check of electrical and electronic components, not to be confused with the more complex functional test after repair or overhaul;
- (f) the functions in respect to assembly operations are-
 - (i) assemble aircraft components or parts, such as landing gear, wings, and controls;
 - (ii) rig and align aircraft components, including the complete aircraft and control system;
 - (iii) install powerplants;
 - (iv) install instruments and accessories;
 - (v) assemble and install cowlings, fairings and panels;
 - (vi) maintain and install windshields and windows;
 - (vii) maintain and install windshields and panels;
 - (viii) jack or hoist complete aircraft;
 - (ix) balance flight control surfaces;
- (g) non-destructive inspection and testing using dye penetrates and magnetic, ultrasonic, radiographic, fluorescent or holographic inspection techniques;
- (h) the functions in respect to inspection of metal structures are the inspection of metal structures using appropriate inspection equipment to perform the inspections required on an aircraft.

(3) For an airframe rating classes 1 and 2, in addition to having the capability to perform the appropriate functions set for class 1, 2, 3 or 4 airframe ratings, an approved maintenance organization holding a class 1 or 2 airframe rating for composite aircraft shall have the following equipment-

- (a) autoclave capable of providing positive pressure and temperature consistent with materials used;
- (b) a circulating oven with vacuum capability storage equipment, such as freezer, refrigerator and temperature-control cabinets or other definitive storage areas;
- (c) honeycomb core cutters;
- (d) non-destructive inspection equipment such as x-ray, ultrasonic or other types of acoustic test equipment as recommended by the manufacturers;
- (e) cutting tools, such as diamond or carbide saws or router bits, suitable for cutting and trimming composite structures;
- (f) scales adequate to ensure proper proportioning by mass of epoxy adhesive and resins;

- (g) mechanical pressure equipment such as vacuum bagging or sand bags, as appropriate;
- (h) thermocouple probes necessary to monitor cure temperatures;
- (i) hardness testing equipment using heat guns that are thermostatically controlled for curing repairs; and
- (j) appropriate inspection equipment to perform inspection of composite structures as recommended by the manufacturer and as required for inspection of an aircraft under these regulations.

(4) For a powerplant rating, classes 1 and 2-

- (a) the functions in respect to maintenance and alteration of powerplants, including replacement of parts-
 - (i) perform chemical and mechanical cleaning;
 - (ii) perform disassembly operations;
 - (iii) replace bushings, bearings, pins, and inserts;
 - (iv) perform heating operations that may involve the use of recommended techniques that require controlled heating facilities;
 - (v) perform chilling or shrinking operations;
 - (vi) remove and replace studs;
 - (vii) inscribe or affix identification information;
 - (viii) paint powerplants and components;
 - (ix) apply anticorrosion treatment for parts;
- (b) inspection of all parts, using appropriate inspection aids-
 - (i) determine precise clearances and tolerances of all parts;
 - (ii) inspect alignment of connecting rods, crankshafts, and impeller shafts;
- (c) accomplishment of routine machine work-
 - (i) ream inserts bushings, bearings and other similar components
 - (ii) reface valves;
- (d) accomplishment of assembly operations-
 - (i) perform valve and ignition-timing operations;
 - (ii) fabricate and test ignition harnesses;

- (iii) fabricate and test rigid and flexible fluid lines; storage;
- (v) hoist engines by mechanical means.

(5) For a powerplant rating class 3, in addition to having the capability to perform the appropriate functions as required for class 1 and 2 powerplant ratings, a maintenance organization holding a class 3 power plant rating shall have the following equipment-

- (a) testing equipment;
- (b) surface treatment antigallant equipment;
- (c) functional and equipment requirements recommended by the manufacturer; and
- (d) appropriate inspection equipment.

(6) For propeller rating class 1 the functions are-

- (a) remove and install propellers;
- (b) maintain and alter propellers, including installation and replacement of parts-
 - (i) replace bladed tipping;
 - (ii) refinish wood propellers;
 - (iii) make wood inlays;
 - (iv) refinish plastic blades;
 - (v) straighten bent blades within repairable tolerances;
 - (vi) modify blade diameter and profile;
 - (vii) polish and buff;
 - (viii) perform painting operations;

(c) inspect components using appropriate inspection aids-

- (i) inspect propellers for conformity with drawings and specifications of the manufacturer;
- (ii) inspect hubs and blades for failures and defects using all visual aids, including the etching of parts;
- (iii) inspect hubs for wear of splines or keyways or any other defect;

(d) balance propellers-

- (i) test for proper track on aircraft;
- (ii) test for horizontal and vertical unbalance using precision equipment;

(7) For propeller rating class 2 the functions are-

- (a) remove and install aircraft propellers, which may include installation and replacement of parts-
 - (i) perform all functions listed under class 1 propellers when applicable to the make and model of propeller in this class;
 - (ii) properly lubricate moving parts;
 - (iii) assemble complete propeller and subassemblies using special tools when required;
 - (b) inspect components using appropriate inspection aids for those functions listed for class propellers under paragraphs (b) and (c) when applicable to the make and model of the propeller being worked on;
 - (c) repair or replace components or parts-
 - (i) replace blades, hubs or any of their components;
 - (ii) repair or replace anti-icing devices;
 - (iii) remove nicks or scratches from metal blades;
 - (iv) repair or replace electrical propeller components;
 - (d) balance propellers, including those functions listed for class 1 propellers under sub-regulation 6 (d) when applicable to the make and model of the propeller being worked on;
 - (e) test propeller pitch-changing mechanism-
 - (i) test hydraulically operated propellers and components;
 - (ii) test electrically operated propellers and components.
- (8) For radio rating class 1, 2 and 3, the functions are-
- (a) perform physical inspection of radio systems and components by visual and mechanical inspection;
 - (b) perform electrical inspection of radio systems and components by means of appropriate electrical or electronic test equipment;
 - (c) check aircraft wiring, antennas, connectors, relays, and other associated avionics components to detect installation faults;
 - (d) check engine ignition systems and aircraft accessories to determine sources of electrical interference;
 - (e) check aircraft power supplies for adequacy and proper functioning;
 - (f) remove, repair, and replace aircraft antennas;
 - (g) measure transmission line attenuation;

- (h) measure radio component values such as inductance, capacitance, and resistance;
- (i) determine waveforms and phase in avionics equipment when applicable;
- (j) determine proper aircraft radio antenna, lead-in, and transmission-line characteristics and determine proper locations for type of radio equipment to which the antenna is connected;
- (k) determine the operational condition of radio equipment installed in aircraft by using appropriate portable test apparatus;
- (l) test all types of transistors: solid-state, integrated circuits; or similar devices in equipment appropriate to the class rating;
- (m) test radio indicators.

(9) For radio rating class 1, in addition to having the capability to perform the functions listed in sub regulation (8)-

- (a) test and repair headsets, speakers, and microphones;
- (b) measure radio transmitter power output;
- (c) measure modulation values, noise, and distortion in communication equipment.

(10) For radio rating class 2, in addition to having the capability to perform the functions listed in sub regulation (8)-

- (a) test and repair headsets;
- (b) test speakers;
- (c) measure loop antenna sensitivity by appropriate methods;
- (d) calibrate to approved performance standards any radio navigational equipment, en route and approach aids, or similar equipment, as appropriate to this rating.

(11) For radio rating class 3, in addition to having the capability to perform the functions listed in sub regulation (8), measure transmitter power output.

(12) For computer systems rating class 1, 2, and 3 the functions are-

- (a) maintain computer systems in accordance with the specifications, test requirements and recommendations of the manufacturer;
- (b) remove, maintain and replace computer systems in aircraft;
- (c) inspect, test and calibrate computer system equipment, including software.

(13) For instrument rating class 1 the functions are-

- (a) diagnose instrument malfunctions on the following instruments-
 - (i) rate-of-climb indicators;

- (ii) altimeters;
- (iii) airspeed indicators;
- (iv) vacuum indicators;
- (v) oil pressure gauges;
- (vi) hydraulic pressure gauges;
- (vii) de-icing pressure gauges;
- (viii) pitot-static tube;
- (ix) direct indicating compasses;
- (x) accelerometer;
- (xi) direct indicating tachometers;
- (xii) direct reading fuel quantity gauges;

(b) inspect, test and calibrate the instruments listed in paragraph (a) on and off the aircraft, as appropriate.

(14) For instrument rating class 2 the functions are-

(a) diagnose instrument malfunctions of the following instruments-

- (i) tachometers;
- (ii) synchroscope;
- (iii) electric temperature indicators;
- (iv) electric resistance-type indicators;
- (v) moving magnet-type indicators;
- (vi) warning units (oil and fuel);
- (vii) Selsyn systems and indicators;
- (viii) self-synchronous systems and indicators;
- (ix) remote indicating compasses;
- (x) quantity indicators;
- (xi) avionics indicators;
- (xii) ammeters;
- (xiii) voltmeters;

- (xiv) frequency meters.
- (b) inspect, test and calibrate instruments listed in paragraph (a) on and off the aircraft, as appropriate.
- (15) For instrument rating class 3 the functions are-
 - (a) diagnose instrument malfunctions of the following instruments-
 - (i) turn and bank indicators;
 - (ii) directional gyros;
 - (iii) horizon gyros;
 - (iv) auto pilot control units and components;
 - (b) inspect, test and calibrate instruments listed in paragraph (a) of this regulation on and off the aircraft, as appropriate.
- (16) For instrument rating class 4 the functions are-
 - (a) diagnose instrument malfunctions of the following instruments-
 - (i) capacitance-type quantity gauge;
 - (ii) laser gyros;
 - (iii) other electronic instruments;
 - (b) inspect, test and calibrate instruments listed in paragraph (a) on and off the aircraft, as appropriate.
- (17) For accessory rating class 1, 2, 3 and 4, the AMO shall perform the following functions in accordance with the specifications and recommendations of the manufacturer-
 - (a) diagnose accessory malfunctions;
 - (b) maintain and alter accessories, including installing and replacing parts;
 - (c) inspect, test and calibrate accessories on and off the aircraft as appropriate.

Subcontracted maintenance functions

14. (1) An approved maintenance organization (AMO) may sub-contract its maintenance functions to another approved maintenance organization.

(2) An AMO may sub-contract maintenance functions to an organization which is not approved by the Authority if the AMO meets the following conditions-

- (a) the AMO shall be approved for work which is to be sub-contracted and have the capability to assess the competence of the sub-contractor;
- (b) the AMO must retain responsibility for quality control and release of the sub-contracted activities, including the appropriate airworthiness requirements; and

- (c) have necessary procedures for the control of the sub-contracted activities, together with the terms for the personnel responsible the management.

PART III

HOUSING, FACILITIES, EQUIPMENT AND MATERIALS

General

15. An approved maintenance organization (AMO) shall have personnel, facilities, equipment and materials in quantity and quality that meet the standards specified under these Regulations.

Housing and facility requirements

16. (1) Housing and facilities shall be provided as appropriate for all planned work ensuring, in particular, protection from weather.

(2) All work environments shall be appropriate for the task carried out and shall not impair the effectiveness of personnel.

(3) Office accommodation shall be appropriate for the management of planned work including, in particular, the management of quality, planning and technical records.

(4) Specialized workshops and bays shall be segregated, as appropriate; to ensure that environmental and work area contamination is unlikely to occur.

(5) Storage facilities shall be provided for parts, equipment, tools and materials.

(6) Storage conditions shall be provided security for serviceable parts, segregation of serviceable parts from unserviceable parts and for prevention of deterioration of and damage to stored items.

(7) For ongoing maintenance of aircraft, aircraft hangars shall be available and large enough to accommodate aircraft during maintenance activities.

(8) Where the hangar is not owned by the approved maintenance organization (AMO), the AMO shall-

- (a) provide evidence to the Authority that the AMO is authorized to use the hangar;
- (b) demonstrate sufficiency of hangar space to carry out planned base maintenance by preparing a projected aircraft hangar visit plan relative to the maintenance programme;
- (c) update the aircraft hangar visit plan on a regular basis;
- (d) ensure that aircraft component maintenance, aircraft component workshops are large enough to accommodate the components on planned maintenance;
- (e) ensure that aircraft hangar and aircraft component workshop structures prevent the ingress of rain, hail, ice, snow, wind and dust;
- (f) ensure that workshop floors are sealed to minimize dust generation; and
- (g) demonstrate access to hangar accommodation for usage during adverse weather for minor scheduled work or lengthy defect rectification.

(9) Aircraft maintenance staff shall be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner.

(10) Hangars used to house aircraft together with office accommodation shall be such as to ensure a clean, effective and comfortable working environment by ensuring that-

- (a) temperatures are maintained at a comfortable level;
- (b) dust and any other airborne contamination are kept to a minimum and not permitted to reach a level in the work task area where visible aircraft or component surface contamination is evident;
- (c) lighting is such as to ensure each inspection and maintenance task can be carried out; and
- (d) noise levels are not permitted to rise to the point of distracting personnel from carrying out inspection tasks and where it is impractical to control the noise source, such personnel shall be provided with the necessary personal equipment to stop excessive noise causing distraction during inspection tasks.

(11) Where a particular maintenance task requires the application of specific environmental conditions different from those specified in sub-regulation (10), then such conditions shall be observed, (specific conditions are identified in the approved maintenance instructions).

(12) Where the working environment for line maintenance deteriorates to an unacceptable level with respect to temperature, moisture, hail, ice, snow, wind, light, dust or other airborne contamination, the particular maintenance or inspection tasks shall be suspended until satisfactory conditions are re-established.

(13) For both base and line maintenance where dust or other airborne contamination results in visible surface contamination, all susceptible systems shall be sealed until acceptable conditions are re-established.

(14) Storage facilities for serviceable aircraft components shall be clean, well-ventilated and maintained at an even dry temperature to minimize the effects of condensation.

(15) Manufacturer and standards recommendations shall be followed for specific aircraft components.

(16) Storage racks shall provide sufficient support for large aircraft components so that the component is not distorted.

(17) All aircraft components, wherever practicable, shall remain packaged in protective material to minimize damage and corrosion during storage.

Equipment, tools and material

17. (1) An approved maintenance organization (AMO) shall have available the necessary equipment, tools and material to perform the approved scope of work and these items shall be under full control of the AMO.

(2) Equipment and tools shall be available at all times except in the case of any tool or equipment that is so rarely needed that its permanent availability is not necessary.

(3) The Authority may exempt an AMO from possessing specific tools and equipment for maintenance or repair of an aircraft or aircraft component specified in the certificate of the AMO, if the tools and equipment can be acquired temporarily, by prior arrangement and be under the full control of the AMO when needed to perform required maintenance or repairs.

(4) The Authority may not amend the approval to delete the aircraft or aircraft component on the basis that it is a temporary situation and there is a formal agreement from the AMO to *re-acquire tools, equipment or other items before performing any maintenance or repair.*

(5) An AMO shall control all applicable tools, equipment, and test equipment used for product acceptance or for making a finding of airworthiness.

(6) An AMO shall ensure that all applicable tools, equipment and test equipment used for product acceptance or for making a finding of airworthiness are calibrated to ensure correct calibration to a standard acceptable to the Authority and traceable to national or international standards.

(7) An AMO shall keep all records of calibrations and the standards used for calibration.

(8) Except as provided in sub-regulations (6), in the case of foreign manufactured tools, equipment and test equipment, the standard provided by the country of manufacture may be used if approved by the Authority.

(9) Where the manufacturer specifies a particular tool, equipment or test equipment then that tool, equipment or test equipment shall be used unless the manufacturer has identified the use of an equivalent.

(10) Except as provided in sub-regulation (9), tools, equipment or test equipment other than those recommended by the manufacturer shall be acceptable based on at least the following-

(a) the AMO shall have a procedure in the maintenance procedure manual if it intends to use equivalent tools, equipment, or test equipment other than that recommended by the manufacturer;

(b) the AMO shall have a programme to include-

- (i) a description of the procedures used to establish the competence of personnel that make the determination of equivalency of tools, equipment or test equipment;
- (ii) conducting and documenting the comparison made between the specification of the tool, equipment or test equipment recommended by the manufacturer and the equivalent tool, equipment or test equipment proposed;
- (iii) ensuring that the limitations, parameters and reliability of the proposed tool, equipment or test equipment are equivalent to the recommended tools, equipment or test equipment of the manufacturer; and
- (iv) ensuring that the equivalent tool, equipment or test equipment is capable of performing the appropriate maintenance function, all normal tests or calibrations, and checking all parameters of the aircraft or aircraft component undergoing maintenance or calibration; and

(c) the AMO shall have full control of the equivalent tool, equipment or test equipment through an ownership, lease or other legal arrangement.

(11) An AMO approved for base maintenance shall have sufficient aircraft access equipment and inspection platforms or docking such that the aircraft may be properly inspected.

(12) The AMO shall have a procedure to inspect or service and, where appropriate, calibrate tools, equipment, and test equipment on a regular basis and indicate to users that an item is within any inspection or service or calibration time limit.

(13) The AMO shall have a procedure to ensure that if it uses a standard (primary, secondary or transfer standards) for performing calibration, that standard cannot be used to perform maintenance.

(14) A clear system of labelling all tooling, equipment and test equipment shall be used to give information on when the next inspection or service or calibration is due, and where the item is unserviceable for a reason that is not obvious.

(15) A clear system of labelling all tooling, equipment, and test equipment shall be used to give information on when such tooling, equipment and test equipment is not used for product acceptance or for making a finding of airworthiness.

(16) A register shall be maintained for all calibrated tools, equipment and test equipment together with a record of calibrations and standards used.

(17) Inspection, service or calibration on a regular basis shall be in accordance with the instructions of the equipment manufacturers, except where the AMO can show by results that a different time period is appropriate in a particular case and is acceptable to the Authority.

PART IV **ADMINISTRATION**

AMO personnel and training requirements

18. (1) An approved maintenance organization (AMO) shall appoint a management person or group of persons acceptable to the Authority, whose responsibilities include ensuring that the AMO is in compliance with these Regulations.

(2) A person appointed as manager shall represent the maintenance management structure of the AMO and shall be responsible for all functions specified in these Regulations.

(3) A manager shall be directly responsible to an accountable manager who shall be acceptable to the Authority.

(4) An AMO shall employ sufficient personnel to perform maintenance functions in accordance with the AMO certificate.

(5) The competence of personnel involved in maintenance shall be established in accordance with a procedure and to a standard acceptable to the Authority.

(6) A person signing a certificate of release to service shall be qualified in accordance with the Civil Aviation Authority (Personnel Licensing) Regulations as appropriate to the work performed and as acceptable to the Authority.

(7) The maintenance personnel and the certifying staff shall meet the qualification requirements and receive initial and continuation training to their assigned tasks and responsibilities in accordance with a programme acceptable to the Authority.

(8) The training programme established by the AMO shall include training in knowledge and skills related to human performance, including coordination with other maintenance personnel and flight crew.

(9) The functions of an AMO shall be allocated to individual managers or combined in any number of ways, dependent upon the size of the AMO.

Management personnel required for Aircraft Maintenance Organizations

19. (1) An approved maintenance organization (AMO) shall have an accountable manager acceptable to the Authority, with corporate authority for ensuring that all the necessary resources are available to support the AMO approval.

(2) The AMO shall have qualified personnel with proven competence in civil aviation available and serving in the following positions or their equivalent-

- (a) base maintenance manager;
- (b) line maintenance manager;
- (c) workshop manager;
- (d) quality manager.

(3) For the purpose of sub regulation (2) "competence in civil aviation" means that an individual has a technical qualification and management experience acceptable to the Authority for the position served.

(4) The Authority may approve positions, other than those listed in sub-regulation (2) if the AMO is able to show that it can perform the approved functions safely under the direction of fewer or different categories of management personnel due to the size of the AMO.

(5) The AMO shall make temporary arrangements to ensure continuity of supervision of its functions if maintenance is conducted in the absence of any required management personnel.

(6) A person serving in a required management position in an AMO shall not serve in a similar position in any other AMO unless exemption is issued by the Authority.

Qualifications and Responsibilities of AMO personnel

20. (1) The accountable manager shall possess the following qualifications-

- (a) a background in the management of aircraft maintenance organizations;
- (b) knowledge of these Regulations and other regulations and materials published by the Authority that are applicable to aircraft maintenance; and
- (c) a thorough knowledge of the maintenance procedures of the organization.

(2) When authorized by the Authority, the accountable manager may delegate all or part of the responsibility of the accountable manager, in writing to another person in a management position within the organization;

(3) A base maintenance manager shall, dependent upon the scope of approval of an approved maintenance organization, be responsible for ensuring that all maintenance carried out in the hangar is in accordance with the approved maintenance schedule or programme.

(4) The minimum qualification for the base maintenance manager shall be as follows-

- (a) a licensed maintenance engineer with appropriate ratings in airframe and engines or avionics; and
- (b) at least five years experience in maintaining the same category of aircraft including one year in the capacity of returning aircraft to service;
- (c) have received type training on every aircraft maintained within the approved scope of the AMO;
- (d) have attended a management or supervisory course.

(5) A line maintenance manager shall be responsible for ensuring that all maintenance required to be carried out on the line, including line defect rectification, is performed to the required standards, and any corrective action resulting from quality compliance monitoring.

(6) The minimum qualifications for line maintenance manager are-

- (a) a licensed maintenance engineer with appropriate airframe, powerplant or avionics ratings; and
- (b) at least five years experience in maintaining the same category of aircraft including one year in the capacity of returning aircraft to service; and
- (c) have attended a management or supervisory course.

(7) A workshop manager shall be responsible for ensuring that all work on aircraft components in the workshop and any corrective action resulting from quality compliance monitoring are performed to required standards.

(8) The minimum qualifications for a workshop manager are-

- (a) a licensed maintenance engineer with appropriate airframe, engines or avionics rating;
- (b) at least five years experience in maintaining components for the same category of aircraft including one year in the capacity of returning components to service;
- (c) have attended management or supervisory course.

(9) A quality manager shall be responsible for monitoring the compliance of the AMO with these Regulations, and requesting remedial action as necessary by the base maintenance manager or line maintenance manager or workshop manager or the accountable manager, as appropriate.

(10) The minimum qualifications for a quality manager are-

- (a) a licensed maintenance engineer with appropriate airframe and engine or avionics ratings;
- (b) at least five years experience in the field of aircraft maintenance; and
- (c) shall have successfully completed training in a quality management course recognized by the Authority.

Man-hours

21. (1) An approved maintenance organization (AMO) shall have a production man-hours plan showing that it has sufficient man-hours for the intended work.

(2) Where an AMO is certified for base maintenance, the man-hours plan shall relate to the aircraft hangar visit plan.

(3) Man-hours plans shall be regularly updated.

(4) Work performed on any aircraft registered outside Swaziland shall be taken into account where it impacts upon the production man-hours plan.

(5) Quality monitoring compliance function relating to man-hours shall be such as will be sufficient to meet the requirement of rest and duty limitations for persons performing maintenance functions.

Assessment of personnel

22. (1) Planners, aircraft maintenance engineers, mechanics, supervisors and certifying staff of an approved maintenance organization (AMO) shall be assessed for competence by "on the job" evaluation or by an examination relevant to their particular role within the AMO before unsupervised work is permitted.

(2) The assessment specified in sub-regulation (1) shall be based on the job description for each post and shall establish that-

- (a) planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the aircraft maintenance program;
- (b) aircraft maintenance engineers and mechanics are able to carry out maintenance tasks to any standard specified in the maintenance instructions and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards;
- (c) supervisors are able to ensure that all required maintenance tasks are carried out and where not done or where it is evident that a particular maintenance task cannot be carried out to the maintenance instructions, then such problems will be reported to and agreed upon by the quality department of the AMO; and
- (d) certifying staff are able to determine when an aircraft or an aircraft component is or is not ready for release to service.

(3) Planners, supervisors and certifying staff, shall demonstrate knowledge of AMO procedures relevant to their particular role.

Training of certifying staff

23. (1) Initial and continuing training of certifying staff shall be performed by an approved maintenance organization (AMO) or a training organization selected by the AMO.

(2) The AMO shall establish the curriculum and standards for training of personnel and establish pre-qualification standards intended to ensure that the trainee has a reasonable chance of successfully completing any course.

(3) The training programme, training facilities and the curriculum to train certifying staff as provided for in sub-regulation (2) shall be approved by the Authority.

(4) The training programme submitted to the Authority under sub-regulation (3) shall include-

- (a) details of the number of personnel who will receive initial training to qualify as certifying staff over specified time periods; and
 - (b) for maintenance personnel and certifying staff of the AMO, training in knowledge and skills related to live performance including coordination with other maintenance personnel and flight crew.
- (5) All trained personnel shall be examined at the end of each training course.
- (6) All certifying staff of an AMO shall undergo initial training those covers-
- (a) basic engineering theory relevant to the scope of work performed by the AMO;
 - (b) specific information on the actual aircraft type on which the person is intended to become a certifying person including the impact of repairs and system or structural defects; and
 - (c) company procedures relevant to the tasks of the certifying staff.

(7) All certifying staff of an AMO who have undergone initial training shall undertake continuation training in changes in AMO procedures and changes in the standard of aircraft or aircraft component maintained.

Rest and duty limitations for persons performing maintenance functions in an AMO

24. (1) No person shall-

- (a) assign maintenance functions for aircraft unless the assignee has had a minimum rest period of 8 hours prior to the beginning of duty;
- (b) perform maintenance functions for aircraft unless that person has had a minimum rest period of 8 hours prior to the beginning of duty.

(2) No person shall-

- (a) schedule a person performing maintenance functions for aircraft for more than 12 consecutive hours of duty; or
- (b) perform maintenance functions for aircraft for more than 12 consecutive hours of duty.

(3) In situations involving unscheduled aircraft unserviceability, persons performing maintenance functions for aircraft may be continued on duty for-

- (a) up to 16 consecutive hours; or
- (b) twenty hours in 24 consecutive hours.

(4) Following unscheduled duty periods, the person performing maintenance functions for aircraft shall have a mandatory rest period of 10 hours.

(5) An approved maintenance organization (AMO) shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any seven consecutive day period.

Record of certifying staff

25. (1) An approved maintenance organization (AMO) shall maintain a roster of all certifying staff, which shall include details of the scope of their authorization and the certifying staff shall be notified in writing of the scope of that authorization.

(2) The following minimum information shall be kept on record in respect of each certifying person-

- (a) name;
- (b) date of birth;
- (c) basic training;
- (d) type training;
- (e) continuation training;
- (f) experience;
- (g) qualifications relevant to the approval;
- (h) scope of the authorization;
- (i) date of first issue of the authorization;
- (j) expiration date of the authorization, where appropriate; and
- (k) identification number of the authorization.

(3) Records of certifying staff shall be controlled by the quality department of the AMO.

(4) The number of persons authorized to access the records system shall be limited to minimize the possibility of records being altered in an unauthorized manner and to limit confidential records from becoming accessible to unauthorized persons.

(5) Certifying staff shall be given reasonable access on request, to their records.

(6) The Authority may investigate the records system for initial and continued approval or when the Authority has cause to doubt the competence of a particular certifying person.

(7) An AMO shall keep the record of certifying staff for at least two years following a date on which the staff has ceased employment with the AMO or upon withdrawal of the certifying staff authorization.

(8) The certifying staff shall, upon request, be furnished with a copy of their record on leaving the AMO.

(9) The authorization document issued to the certifying staff under this regulation shall be in a style that makes its scope clear to certifying staff and the Authority that may be required to examine the document and where codes are used to define scope, an interpretation document shall be readily available.

(10) Certifying staff shall carry the authorization document at all times and shall produce it on request from the Authority.

PART V APPROVED MAINTENANCE ORGANISATION OPERATING RULES

AMO maintenance procedures manual

26. 1) An approved maintenance organization (AMO) shall provide a maintenance procedures manual for use by themaintenance personnel.

(2) An AMO maintenance procedure manual and any subsequent amendments shall be approved by the Authority prior to use.

(3) An AMO maintenance procedures manual shall specify the scope of work required of the AMO in order to satisfy the relevant requirements for approval of an aircraft or aircraft component for return to service.

(4) An AMO maintenance procedures manual and any other manual it identifies shall-

- (a) include instructions and information necessary to allow the personnel to perform their duties and responsibilities with a high degree of safety;
- (b) be in a form that is easy to revise and contain a system which allows personnel to determine current revision status;
- (c) have the date of the last revision printed on each page containing the revision;
- (d) not be contrary to any laws of Swaziland or the operations specifications of the AMO; and
- (e) include a reference to appropriate civil aviation regulations.

(5) Without prejudice to the preceding provisions of this regulation, an AMO maintenance procedures manual shall contain the following information-

- (a) a statement signed by the accountable manager confirming that the AMO maintenance procedures manual and any associated manuals define the compliance of the AMO with this regulation and will be complied with at all times;
- (b) a list which describes the duties and responsibilities of the management personnel and the matters on which they may deal directly with the Authority on behalf of the AMO;
- (c) a procedure to establish and maintain a current list of the titles and names of the management personnel of the AMO accepted by the Authority;

- (d) an organization chart showing associated chains of responsibility of the management personnel;
- (e) a procedure to establish and maintain a current roster of certifying staff;
- (f) a description of the procedures used to establish the competence of maintenance personnel;
- (g) a general description of manpower resources;
- (h) description of the method used for the completion and retention of the maintenance records;
- (i) a description of the procedure for preparing the certificate of release to service and the circumstances under which the certificate of release to service is to be signed;
- (j) a description, when applicable, of additional procedures for complying with the maintenance procedures and requirements of air operators certificate (AOC) holder;
- (k) a description of the procedure for complying with the service information reporting requirement contained in regulation 38;
- (l) a description of the procedure for receiving, amending and distributing within the maintenance organization all necessary airworthiness data from the type certificate holder or the type design organization;
- (m) a general description of the facilities located at each physical address specified in the certificate of the AMO;
- (n) a general description of the scope of work of the AMO relevant to the extent of approval;
- (o) the notification procedure for the AMO to use when requesting the approval of changes to the organization of the AMO from the Authority;
- (p) the amendment procedure for the AMO maintenance procedures manual, including the submission to the Authority;
- (q) the procedures of the AMO, acceptable to the Authority, to ensure manual good maintenance practices and compliance with the requirements in these Regulations;
- (r) the procedures of the AMO to establish and maintain an independent quality system to monitor compliance with the adequacy of the procedure to ensure good quality maintenance practices and airworthy aircraft and aircraft components; compliance monitoring shall include a feedback system, acceptable to the Authority, to the person or group of persons specified in regulation 19, and ultimately to the accountable manager to ensure, as necessary, corrective action; such feedback system shall be acceptable to the Authority;
- (s) AMO procedures for self-evaluations, including methods and frequency of such evaluations and procedures for reporting results to the accountable manager for review and action;
- (t) a list of operators, if appropriate, to which the AMO provides an aircraft maintenance service;

- (u) a list of organizations performing maintenance on behalf of the AMO; and
 - (v) a list of the line maintenance locations of the AMO and procedures, if applicable.
- (6) The list of personnel and certifying staff for sub-regulation (5) (b) and (5) e) may be separate from the AMO maintenance procedures manual, but shall be kept current and available for review by the Authority when requested.
- (7) AMO personnel shall be familiar with those parts of the manuals that are relevant to the maintenance work they perform.
- (8) An AMO shall specify in the AMO maintenance procedures manual that should amend the manual, particularly in the case where the manual consists of several parts.
- (9) The quality manager of an AMO shall be responsible for-
- (a) monitoring the amendment of the AMO maintenance procedures manual, including associated procedures manuals; and
 - (b) submitting proposed amendments to the Authority, unless the Authority has agreed, by a procedure stated in the amendment section of the procedures manual, that some defined class of amendments may be incorporated without approval by the Authority.
- (10) The AMO maintenance procedures manual shall address four main areas-
- (a) the management procedure covering the parts previously specified;
 - (b) the maintenance procedure covering all aspects of how aircraft components may be accepted from outside sources and how aircraft will be maintained to the required standard;
 - (c) the quality system procedures, including the methods of qualifying mechanics, inspection, certifying staff and quality audit personnel; and
 - (d) contracted AOC holder procedures and paperwork.
- (11) An AMO maintenance procedures manual shall be in a form set out in the First Schedule of these Regulations.

Maintenance procedures and independent quality system

27. (1) An approved maintenance organization (AMO) shall establish maintenance procedures acceptable to the Authority to ensure good maintenance practices and compliance with all relevant requirements in these Regulations, such that aircraft and aircraft components may be properly released to service.

- (2) The maintenance procedure established under sub-regulation (1) shall-
 - (a) cover all aspects of maintenance activity and describe standards to which the AMO intends to work;
 - (b) take into account the aircraft and aircraft component design and AMO standards; and

(c) address the provisions and limitations of these Regulations.

(3) An AMO shall establish an independent quality system, acceptable to the Authority, to monitor compliance with and adequacy of the procedures and by providing a system of inspection to ensure that all maintenance is properly performed.

(4) The compliance monitoring specified in sub-regulation (3) shall include a feedback system to the designated management person or group of persons directly responsible for the quality system and ultimately to the accountable manager to ensure, as necessary, corrective action.

(5) The quality system established under sub-regulation (3)-

(a) may be an independent system under the control of the quality manager that evaluates the maintenance procedures and the correctness of the equivalent safety case process; and

(b) shall include a procedure to initially qualify and periodically perform audits on persons performing work on behalf of the AMO.

(6) The quality system of an AMO shall be-

(a) sufficient to review all maintenance procedures as described in the maintenance procedures manual in accordance with an approved program once a year for each aircraft type maintained;

(b) indicate when audits are due, when they are completed, and establish a system of audit reports which can be reviewed by the Authority on request.

(7) The audit system established under sub-regulation (6) (b) shall clearly establish a means by which audit reports containing observations about non-compliance or poor standards are communicated to the accountable manager.

Capability list

28. (1) An approved maintenance organization (AMO) shall prepare and retain a current capability list approved by the Authority.

(2) An AMO shall not perform maintenance, preventive maintenance or modifications on an article until the article has been listed on the capability list in accordance with these Regulations.

(3) A capability list specified in sub-regulation (2) shall identify each article by make and model, part number or other nomenclature designated by the article's manufacturer.

(4) An article may be listed on the capability list only if the article is within the scope of the ratings and classes of the certificate of the AMO and only after the AMO has performed a self-evaluation in accordance with regulation 29(5).

(5) An AMO shall perform the self-evaluation described in sub-regulation (4) to determine that the maintenance organization has all the facilities, equipment, material, technical data, processes, housing and trained personnel in place to perform the work on the article as required by this regulation.

(6) If an AMO makes a determination under sub-regulation (5), it may list the article on the capability list.

(7) The document of the evaluation described in sub-regulation (4) must be signed by the accountable manager and shall be retained on file by the AMO.

(8) Upon listing an additional article on its capability list, the AMO shall send a copy of the list to the Authority.

(9) The capability list shall be available in the premises for inspection by the public and the Authority.

(10) The self-evaluations must be available in the premises for inspection by the Authority.

(11) An AMO shall retain a capability list and self-evaluation for two years from the date accepted by the accountable manager.

AMO privileges

29. (1) An approved maintenance organization (AMO) shall only carry out the following tasks as permitted by and in accordance with the AMO maintenance procedures manual-

- (a) maintain an aircraft or aircraft components for which it is rated at the locations identified in the approval certificate;
- (b) maintain any aircraft for which it is rated at any location subject to the need for such maintenance arising from unserviceability of the aircraft;
- (c) describe the activities in support of a specific AOC holder where that (AOC) holder has requested the service of the AMO at locations other than the location identified on the AMO certificate and the AMO has been rated to maintain the aircraft of that specific AOC holder at the requested location in the AMO operation provisions approved by the Authority; and
- (d) issue a certificate of release to service in respect of paragraphs (a), (b) and (c) upon completion of maintenance in accordance with limitations applicable to the AMO.

(2) The AMO may maintain or alter any article for which it is rated at a place other than the AMO location if-

- (a) the function would be performed in the same manner as when performed at the AMO and in accordance with this Part; or
- (b) all necessary personnel, equipment, material and technical or approved standards are available at the place where the work is to be done; and
- (c) the maintenance procedure manual of the station specified approved procedures governing work to be performed at that place other than the location of the AMO.

AMO limitations

30. An approved maintenance organization (AMO) may maintain an aircraft or aircraft component for which it is approved when all necessary housing, facilities, equipment, tools, material, approved technical data and certifying staff are available.

Certificate of release to service

31. (1) A certificate of release to service shall be issued by certifying staff when satisfied that all required maintenance of the aircraft or aircraft component has been properly carried out by the approved maintenance organization (AMO) in accordance with the maintenance procedures specified in the maintenance procedures manual.

(2) An aircraft component, which has been maintained off the aircraft, requires the issue of a certificate of release to service for such maintenance and another certificate of release to service in regard to being installed properly on the aircraft.

(3) A certificate of release to service shall contain-

- (a) basic details of the maintenance carried out;
- (b) the date such maintenance was completed; and
- (c) the identity, including the authorization reference, of the AMO and certifying staff issuing the certificate.

(4) A certificate of release to service is required-

- (a) before flight at the completion of any package of maintenance scheduled by the approved aircraft maintenance program on the aircraft, whether such maintenance took place as base or line maintenance;
- (b) before flight at the completion of any defect rectification, while the aircraft operates between scheduled maintenance; and
- (c) at the completion of any maintenance on an aircraft component when off the aircraft.

(5) A certificate of release to service shall contain the following statement: "Certifies that the work specified was carried out in accordance with current regulations and in respect of that work the aircraft or aircraft component is considered ready for release to service".

(6) A certificate of release to service shall reference the data specified in the manufacturer's or operator's instructions or the aircraft maintenance program which itself may cross-reference to a manufacturer's instruction in a maintenance manual, service bulletin, or other maintenance related document.

(7) Where instructions include a requirement to ensure that a dimension or test figure is within a specific tolerance as opposed to a general tolerance, the dimension or test figure shall be recorded unless the instruction permits the use of GO or NO GO gauges and, it shall not be sufficient to state that the dimension or the test figure is within tolerance.

(8) Where extensive maintenance has been carried out, it is acceptable for the certificate of release to service to summarize the maintenance as long as there is a cross-reference to the work-pack containing full details of maintenance carried out.

(9) The date such maintenance was carried out shall include when the maintenance took place relative to any life or overhaul limitation in terms of date, flying hours, cycles, landings or some other relevant value as appropriate.

(10) Dimensional information shall be retained in the work-pack record.

(11) The person issuing the certificate of release to service shall use a full signature and preferably a certification stamp.

(12) Where a computer release to service system is used the Authority will need to be satisfied that only the particular person can electronically issue the certificate of release to service.

Maintenance records

32. (1) An approved maintenance organization (AMO) shall record, in a form acceptable to the Authority, all details of work carried out.

(2) An AMO shall provide a copy of each certificate of release to service to the aircraft operator, together with a copy of any specific maintenance data used for repairs or modifications carried out.

(3) An AMO shall retain a copy of all detailed maintenance records and any associated maintenance data for two years from the date the aircraft or aircraft component to which the work relates was released from the AMO.

(4) A person who maintains, performs preventive maintenance, rebuilds, or modifies an aircraft or aircraft component shall-

- (a) make an entry in the maintenance record of that equipment showing-
 - (i) a description and reference to data acceptable to the Authority of work carried out;
 - (ii) the date of completion of the work carried out;
 - (iii) the name of the person performing the work if other than the person specified in this regulation;
 - (iv) the work performed on the aircraft or aircraft component has been performed satisfactorily, the signature, certificate number and kind of certificate held by the person approving the work; and
 - (v) the authorized signature, which constitutes the approval for return to service, the AMO certificate number and kind of certificate held by the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part or portions of the aircraft or parts;
- (b) in addition to the entry specified in paragraph (a), enter on a form major repairs and the form executed by the person performing the work, in the manner prescribed by the Authority.

(5) No person shall describe in any required maintenance entry or form an aircraft or aeronautical component as being overhauled unless-

- (a) using methods, techniques and practices acceptable to the Authority, it has been disassembled, cleaned, inspected as permitted, repaired as necessary and reassembled; and

- (b) it has been tested in accordance with approved standards and technical data or in accordance with current standards and technical data acceptable to the Authority which have been developed and documented by the holder of the type certificate, supplemental type certificate or a material, part, process or appliance approval under a technical standard order (TSO).

(6) No person shall describe in any required maintenance entry or form, an aircraft or other aircraft components as being rebuilt unless it has been-

- (a) disassembled, cleaned, inspected as permitted;
- (b) repaired as necessary; and
- (c) reassembled and tested to the same tolerances and limits as a new item, using either new parts or used parts that either conform to new part tolerances and limits or to approved oversized or undersized dimensions.

(7) No person shall issue a certificate of release to service to any aircraft or aircraft component that has undergone maintenance, preventive maintenance, rebuilding, or modification unless-

- (a) the appropriate maintenance record entry specified in sub-regulation (4) has been made; and
- (b) the major repair and major modification form specified in sub-regulation (4) authorized by or furnished by the Authority has been executed in a manner prescribed by the Authority.

(8) If a repair or modification results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data shall be appropriately revised and set forth as prescribed by the Authority.

(9) A person approving return to service an aircraft or aircraft component, after any inspection performed in accordance with this regulation, shall make an entry in the maintenance record of that equipment containing the following information-

- (a) the type of inspection and a brief description of the extent of the inspection;
- (b) the date of the inspection and aircraft total time in service;
- (c) the authorized signature, an AMO certificate number, and kind of certificate held by the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part or portions thereof;
- (d) if the aircraft is found to be airworthy and approved for return to service, the following or a similarly worded statement—"I certify that this aircraft has been inspected in accordance with (insert type of inspection) inspection and was determined to be in airworthy condition;"
- (e) if the aircraft is not approved for return to service because of needed maintenance, non-compliance with the applicable specifications, airworthiness directives or other approved data, the following or a similarly worded statement—"I certify that this aircraft has been inspected in accordance with (insert type of inspection) inspection and a list of discrepancies and unairworthy items dated (insert date) has been provided for the aircraft owner or operator;" and

- (f) if an inspection is conducted under an inspection programme provided for in this regulation, the entry shall identify the inspection program accomplished and contain a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

(10) If the person performing any inspection required by this regulation finds that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, airworthiness directives or other approved data upon which that aircraft airworthiness depends, that person shall give the owner or lessee a signed and dated list of those discrepancies.

Airworthiness data

33. (1) An approved maintenance organization (AMO) shall have airworthiness data appropriate to support the maintenance work performed on an aircraft or aircraft component from the Authority, the design organization or any other approved design organization in the state of manufacture or state of design, as appropriate.

(2) Maintenance documents include, but are not limited to-

- (a) these Regulations;
- (b) associated advisory material;
- (c) airworthiness directives;
- (d) maintenance manuals of manufacturers;
- (e) repair manuals;
- (f) supplementary structural inspection documents;
- (g) service bulletins;
- (h) service letters;
- (i) service instructions;
- (j) modification leaflets;
- (k) aircraft maintenance programme;
- (l) non destructive test manual; and
- (m) airworthiness notices issued by the Authority.

(3) The Authority may classify data from another authority or organization as mandatory and may require an AMO to hold such data.

(4) Where an AMO modifies airworthiness data specified in sub-regulation (1) or (2) to a format or presentation more useful for its maintenance activities, the AMO shall submit to the Authority an amendment to the maintenance procedure manual for any such proposed modifications for acceptance.

(5) All airworthiness data used by an AMO shall be kept current and made available to all personnel who require access to that data to perform their duties.

(6) A procedure shall be established to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme.

(7) Airworthiness data shall be made available in the work area in close proximity to the aircraft or aircraft components being maintained and for supervisors, mechanics, and certifying staff to refer to.

(8) Where computer systems are used to maintain airworthiness data, the number of computer terminals shall be sufficient in relation to the size of the work program to enable easy access, unless the computer system can produce paper copies.

(9) Where microfilm or microfiche readers-printers are used, a similar requirement as specified in sub-regulation (8) is applicable.

Reporting of un-airworthy conditions

34. (1) An approved maintenance organization (AMO) shall report to the Authority, the aircraft design organization of the state of design any identified condition that could present a serious hazard to the aircraft.

(2) Reports shall be made on a form prescribed by the Authority and contain all pertinent information about the condition known to the AMO.

(3) Where the AMO is contracted by an air operator certificate (AOC) holder to carry out maintenance, that AMO shall report to the AOC holder any condition affecting the aircraft or aircraft component.

(4) Reports shall be made as soon as practicable, but in any case within three days of the AMO identifying the condition to which the report relates.

Inspections

35. (1) An approved maintenance organization (AMO) shall allow the Authority unlimited access to inspect an approved maintenance organization and any of its contract maintenance facilities at any time to determine compliance with these Regulations.

(2) Arrangements for maintenance, preventive maintenance or modifications by a contractor must include provisions for inspections of the contractor by the Authority.

(3) The Authority shall inspect an AMO at least once annually.

Performance standards

36. (1) An approved maintenance organization (AMO) that performs any maintenance, preventive maintenance, or modifications for an air operator certificate (AOC) holder certificated under the Civil Aviation Authority (Air Operator Certification and Administration) Regulations, having an approved maintenance programme or an approved continuous maintenance programme shall perform that work in accordance with the manuals of the AOC holder.

(2) Except as provided in sub-regulation (1), each AMO shall perform its maintenance and modification operations in accordance with the applicable standards in the Civil Aviation Authority (Airworthiness) Regulations.

(3) An AMO shall maintain, in current condition, all service manuals, instructions and service bulletins of the manufacturer that relate to the articles that it maintains or modifies.

(4) An AMO with an avionics rating shall comply with the requirements of these Regulations that apply to electronic systems and shall use materials that conform to approved specifications for equipment appropriate to its rating and test apparatus, shop equipment, performance standards, test methods, modifications and calibrations that conform to the specifications or instructions of the manufacturer, approved specification and if not otherwise specified, in accordance with good practices of the aircraft avionics industry.

PART VI GENERAL

Possession of the licences, certificates or authorization

37. A holder of a licence, certificate or authorization issued by the Authority shall have the licence, certificate or authorization in physical possession or at the work site when exercising the privileges of that licence, certificate or authorization.

Access for inspection

38. An approved maintenance organization (AMO) shall for the purpose of inspection-

- (a) grant the Authority unrestricted access to any of its organization premises, allied facilities and aircraft; and
- (b) ensure that the Authority is granted unrestricted access to any organization or facilities that it has contracted for services associated with maintenance of aircraft.

Drug and alcohol testing and reporting

39. (1) A person who performs any function requiring the approval of the Authority may be tested for drug or alcohol usage.

(2) Where the Authority or any person authorized by the Authority wishes to test a person referred to in sub regulation (1) for the percentage by weight of alcohol in the blood or for the presence of narcotic drugs, marijuana or depressant or stimulant drugs or substances in the body and that person-

- (i) refuses to submit to the test; or
- (ii) having submitted to the test, refuses to authorize the release of the test results, the Authority may suspend or revoke the certificate of the approved maintenance organization (AMO) that employs that person.

(3) In determining whether to suspend or revoke the certificate of the AMO, the Authority shall consider all relevant factors, including-

- (a) whether the AMO had knowledge of the drug or alcohol use;
- (b) whether the AMO encouraged the person to refuse the drug or alcohol test;
- (c) whether the AMO dismissed the person who failed or refused the drug tests; or
- (d) the position that person held in the AMO.

(4) The Authority shall require the AMO to show cause why that person should not be dismissed from the employment of the AMO.

(5) A person who is convicted, whether in or outside Swaziland, for any offence relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana or depressant or stimulant drugs or substances, shall be dismissed from the employment of the AMO.

(6) The Authority may suspend or revoke the certificate of an AMO that refuses to dismiss from its employment a person convicted under sub regulation (5).

Display of certificate

40. A holder of an approved maintenance organization (AMO) certificate shall display a valid certificate issued to the AMO to the public at all times.

Inspection of licences, certificates and authorizations

41. A person who holds a licence, certificate or authorization required by these Regulations shall present it for inspection upon a request by the Authority or any other person authorized by the Authority.

Change of name

42. (1) A holder of a certificate issued under these Regulations may apply to change the name on the certificate.

(2) The holder shall include with the request the current certificate and a legal document verifying the change of name;

(3) The Authority may change the certificate and issue a replacement thereof.

(4) The Authority shall return to the holder the original documents specified in sub-regulation 2 and retain copies of the documents and return the replaced certificate with an endorsement that it has been cancelled.

Change of address

43. (1) A holder of a certificate or authorization issued under these Regulations shall notify the Authority of the change in the physical and mailing address and shall do so in the case of-

(a) physical address, at least 14 days in advance; and

(b) mailing address upon the change;

(2) A person who fails to notify the Authority of the change in the physical address, within the time frame specified in sub-regulation (1) shall not exercise the privileges of the certificate or authorization.

Replacement of documents

44. A person may apply to the Authority in the prescribed form for replacement of documents issued under these Regulations if the documents are lost or destroyed.

Suspension and Revocations of certificates

45. (1) The Authority may, where it considers it to be in the public interest, suspend provisionally, pending further investigation, any certificate, approval, permission, exemption or other document issued, granted or having effect under these Regulations.

(2) The Authority may, upon the completion of an investigation which has shown sufficient ground to its satisfaction and where it considers it to be in the public interest, revoke, suspend or vary any certificate, approval, permission, exemption or other document issued or granted under these Regulations.

(3) The Authority may, where it considers it to be in the public interest, prevent any person or aircraft from flying.

(4) A holder or any person having the possession or custody of any certificate, approval, permission, exemption or other documents which has been revoked, suspended or varied under these Regulations shall surrender it to the Authority within 14 days from the date of revocation, suspension or variation.

(5) The breach of any condition subject to which any certificate, approval, permission, exemption or any other document has been granted or issued under these regulations shall render the document invalid during the continuance of the breach.

Use and retention of certificates and records

46. (1) No person shall-

- (a) use any certificate, approval, permission, exemption or other document issued or required by or under these Regulations which has been forged, altered, revoked or suspended or to which that person is not entitled;
- (b) forge or alter any certificate, approval, permission, exemption or other document issued or required by or under these Regulations;
- (c) lend any certificate, approval, permission, exemption or other document issued or required by or under these Regulations to any other person; or
- (d) make any false representation for the purpose of procuring for that person or any other person the grant issue renewal or variation of any such certificate, approval, permission or exemption or other document.

(2) During the period for which it is required under these Regulations to be preserved, no person shall mutilate, alter, render illegible or destroy any records or any entry made therein, required by or under these Regulations to be maintained or knowingly make or procure or assist in the making of, any false entry in any such record or wilfully omit to make a material entry in such record.

(3) All records required to be maintained by or under these Regulations shall be recorded in a permanent and indelible material.

(4) No person shall purport to issue any certificate or any other document for the purpose of these Regulations unless that person is authorized to do so under these Regulations.

(5) No person shall issue any certificate of the kind referred to in sub-regulation (4) unless that person is satisfied that all statements in the certificate are correct and that the applicant is qualified to hold that certificate.

Reports of violation

47. (1) A person who knows of a violation of the Civil Aviation Authority Act, or any regulation or order issued under the Act shall report it to the Authority.

(2) The Authority will determine the nature and type of any additional investigation or enforcement action that need to be taken.

Enforcement of directions

48. A person who fails to comply with any direction given to that person by the Authority or by any authorized person under any provision of these Regulations shall be deemed for the purposes of these Regulations to have contravened that provision.

Aeronautical user fees

49. (1) The Authority may notify the fees to be charged in connection with the issue, validation, renewal, extension or variation of any certificate, licence or other document, including the issue of a copy or the undergoing of any examination, test, inspection or investigation or the grant of any permission or approval, required by or for the purpose of these Regulations or any orders, notices or proclamations made under these Regulations.

(2) Upon an application being made in connection with which any fee is chargeable in accordance with sub-regulation(1), the applicant shall be required, before the application is entertained, to pay the fee so chargeable.

(3) If an application is withdrawn by the applicant or otherwise ceases to have effect or is refused after payment has been made, the Authority shall not refund the payment made.

Application of regulations to Government and visiting forces, etc.

50. (1) These Regulations shall apply to aircraft, not being military aircraft, belonging to or exclusively employed in the service of the Government and for the purposes of that application, the Department or other authority for the time being responsible for management of the aircraft shall be deemed to be the operator of the aircraft and in the case of an aircraft belonging to the Government, to be the owner of the interest of the Government in the aircraft.

(2) Except as otherwise expressly provided, the naval, military and air force authorities and member of any visiting force and property held or used for the purpose of that force shall be exempt from the provision of these regulations to the same extent as if the visiting force formed part of the military force of Swaziland.

Extraterritorial application of Regulations.

51. Except where the context otherwise requires, the provisions of these Regulations-

- (a) in so far as they apply, whether by express reference or otherwise, to aircraft registered in Swaziland, shall apply to that aircraft wherever they may be;
- (b) in so far as they apply, whether by express reference or otherwise, to other aircraft, shall apply to that aircraft when they are within Swaziland;
- (c) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything by any person in or by any member of, any aircraft registered in Swaziland, shall apply to those persons and crew, wherever they may be; and

(d) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything in relation to any aircraft registered in Swaziland by other persons shall, where such persons are citizens of Swaziland, apply to them where ever they may be.

PART VII OFFENCES AND PENALTIES

Contravention of Regulations

52. A person who contravenes any provision of these Regulations may have the licence, certificate, approval, authorization, exemption or other document revoked or suspended.

Penalties

53. (1) If any of these Regulations, orders, notices or proclamations made under these Regulations is contravened in relation to an aircraft, the operator of that aircraft and the pilot in command, if the operator or the PIC is not the person who contravened that provision shall, without prejudice to the liability of any other person under these Regulations for that contravention, be deemed to have contravened that provision unless the operator or pilot in command proves that the contravention occurred without their consent or connivance and that they exercised all due diligence to prevent the contravention.

(2) A person who contravenes any provision specified as an "A" provision in the Second Schedule commits an offence and is liable, on conviction to a fine not exceeding fifty thousand Emalangeni for each offence or to imprisonment for a term not exceeding one year or to both.

(3) A person who contravenes any provision specified as a "B" provision in the Second Schedule commits an offence and is liable on conviction to a fine not exceeding one hundred thousand Emalangeni for each offence or to imprisonment for a term not exceeding three years or to both.

(4) A person who contravenes any provision of these Regulations not being a provision referred to in the Second Schedule, commits an offence and is liable on conviction to a fine not exceeding one hundred thousand Emalangeni and in the case of a second or subsequent conviction for a similar offence to a fine not exceeding two hundred thousand Emalangeni.

PART VIII EXEMPTIONS

Requirements for application

54. (1) A person may apply to the Authority for an exemption from any of these Regulations.

(2) An application for an exemption shall be submitted not less than 60 days before the proposed effective date, to obtain timely review.

(3) A request for an exemption shall contain the applicant's-

- (a) name;
- (b) physical address and mailing address;
- (c) telephone number;

(d) fax number if available; and

(e) email address if available;

(4) The application shall be accompanied by a fee specified by the Authority.

Substance of the request for exemption

55. (1) An application for an exemption shall contain the following-

(a) a citation of the specific requirement from which the applicant seeks exemption;

(b) an explanation of why the exemption is needed;

(c) a description of the type of operations to be conducted under the proposed exemption;

(d) the proposed duration of the exemption;

(e) an explanation of how the exemption would be in the public interest, that is, benefits the public as a whole;

(f) a detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the regulation in question; and

(g) a review and discussion of any known safety concerns with the requirement, including information about any relevant accidents or incidents of which the applicant is aware.

(2) Where the applicant seeks emergency processing, the application shall contain supporting facts and reasons that the application was not timely filed and the reasons it is an emergency.

(3) The Authority may deny an application if the Authority finds that the applicant has not justified the failure to apply for an exemption on time.

REVIEW, PUBLICATION AND ISSUE OR DENIAL OF THE EXEMPTION

Initial review by Authority

56. (1) The Authority shall review the application for accuracy and compliance with the requirements of regulations 54 and 55.

(2) If the application appears on its face to satisfy this regulation and the Authority determines that a review of its merits is justified, the Authority will publish a detailed summary of the application in either the Gazette, aeronautical information circular or at least one local daily newspaper for comment and specify the date by which comments shall be received by the Authority for consideration.

(3) Where the filing requirements of regulations 54 and 55 have not been met, the Authority will notify the applicant and take no further action until the applicant corrects the application and re-files it in accordance with these Regulations.

(4) If the request is for emergency relief, the Authority shall publish the application or the decision of the Authority as soon as possible after processing the application.

Evaluation of the request

57. (1) After initial review, if the filing requirements have been satisfied, the Authority shall conduct an evaluation of the request to determine-

- (a) whether an exemption would be in the public interest;
- (b) whether the proposal of the applicant would provide a level of safety equivalent to that established by the regulation, although where the Authority decides that a technical evaluation of the request would impose a significant burden on the technical resources of the Authority, the Authority may deny the exemption on that basis;
- (c) whether a grant of the exemption would contravene the applicable ICAO Standards and Recommended Practices; and
- (d) whether the request should be granted or denied, and of any conditions or limitations that should be part of the exemption.

(2) The Authority shall notify the applicant by letter and publish a detailed summary of its evaluation and decision to grant or deny the request.

(3) The summary referred to in sub-regulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

(4) If the exemption affects a significant population of the aviation community of Swaziland the Authority shall publish the summary in aeronautical information circular.

PART IX
TRANSITION AND SAVINGS

Transition and savings

57. A valid licence, certificate, permit or authorization issued or granted by the Authority before the commencement of these Regulations shall remain operational until it expires or is revoked, annulled or replaced.

FIRST SCHEDULE
(regulation 26 (11))

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1.2 Management personnel

1.3 Duties and responsibilities of the management personnel

1.4 Management Organization Chart

1.5 List of certifying staff. Note: A separate document may be referenced

- 1.6 Manpower resources
- 1.7 *General description of the facilities at each address intended to be approve*
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PART 2 MAINTENANCE PROCEDURES

- 2.1 Supplier evaluation procedure
- 2.2 Acceptance/inspection of aircraft components and material from outside contractors.
- 2.3 Storage, tagging and release of aircraft components and material to aircraft maintenance
- 2.4 Acceptance of tools and equipment
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- 2.6 Use of tooling and equipment by staff (including alternate tools)
- 2.7 Cleanliness standards of maintenance facilities
- 2.8 Maintenance instructions and relationship to aircraft/aircraft component manufacturers' *instructions including updating and availability to staff*
- 2.9 Repair procedure
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- 2.13 Maintenance documentation in use and completion of same
- 2.14 Technical record control
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- 2.16 Release to service procedure
- 2.17 Records for the air carrier
- 2.18 Reporting of defects to the Authority/Operator/ Manufacturer
- 2.19 Return of defective aircraft components to store
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- 2.21 Control of computer maintenance record systems
- 2.22 Reference to specific maintenance procedures such as:
 - (i) Engine running procedures,
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PART 12 ADDITIONAL LINE MAINTENANCE PROCEDURES

- L2.1 Line maintenance control of aircraft components, tools, equipment, etc.
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- 3.1 Quality audit of organization procedures
- 3.2 Quality audit of aircraft
- 3.3 Quality audit remedial action procedure
- 3.4 Certifying staff qualification and training procedures
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- 3.6 Quality audit personnel
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- 4.1 Contracted air operators
- 4.2 Air operator procedures and paperwork
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- 5.1 Sample of documents
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(Regulation 57)

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5	Advertising	B
8(2)	Validity and renewal of certificates	A
24	Rest and duty limitations for persons performing maintenance functions in an AMO	A
25	Records of certifying staff	A
26	AMO maintenance procedures manual	A
29(1)	AMO privileges	B
31	Certificate of release to service	B
32	Maintenance records	B
33	Airworthiness dataA	
34	Reporting of unairworthy conditions	A
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46	Use and retention of certificates and records	B
48	Enforcement of directions	A

N. DLAMINI
MINISTER OF PUBLIC WORKS AND TRANSPORT

LEGAL NOTICE NO. 111 OF 2011

CIVIL AVIATION AUTHORITY ACT, 2009
(Act No. 10 of 2009)

CIVIL AVIATION AUTHORITY (PERSONNEL LICENSING)
REGULATIONS, 2011
(Under Section 104)

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PART I
PRELIMINARY

In exercise of the powers conferred by section 104 of the Civil Aviation Authority Act, 2009, the Minister of Public Works and Transport makes the following regulations-

Citation and commencement

1. These regulations may be cited as the Civil Aviation Authority (Personnel Licensing) Regulations, 2011, and shall come into force on the date of publication in the Gazette.

Interpretation

2. In these regulations, unless the context otherwise requires, words or expressions used in the Act have the same meaning as in these Regulations, and-

“accredited medical conclusion” means the conclusion reached by one or more medical experts acceptable to the Authority for the purposes of the case concerned, in consultation with other experts as necessary;

“aeronautical experience” means pilot time obtained in an aircraft, approved synthetic flight trainer for meeting the training and flight time requirements of these Regulations;

“aeroplane” means a power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight;

“air traffic control (ATC) service” means a service provided for the purpose of-

(a) preventing collisions between aircraft and on the manoeuvring area, between aircraft and obstructions; and

(b) expediting and maintaining an orderly flow of traffic;

“air traffic control unit” means a generic term meaning variously, area control centre, approach control unit or aerodrome control tower;

“aircraft” means any machine that derives support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface;

“aircraft category” means classification of aircraft according to specified basic characteristics such as aeroplane, rotorcraft, glider and lighter-than-air and powered-lift aircraft;

“aircraft type” means all aircraft of the same basic design;

“airframe” means the fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces including rotors (but excluding propellers and rotating airfoils of a power plant) and landing gear of an aircraft and their accessories and controls;

“appliance” means an instrument, mechanism, equipment, part, apparatus, appurtenance or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft and is not part of an airframe, power plant or propeller;

“approved maintenance organization (AMO)” means an organisation approved by the Authority to perform specific aircraft maintenance activities including the inspection, overhaul, maintenance, repair or modification and release to service of aircraft or aircraft component;

“approved training” means training conducted under curricula and supervision approved by the Authority;

“authorized instructor” means a person who-

- (a) holds a valid ground instructor licence issued under these Regulations for conducting ground training;
- (b) holds a current flight instructor rating issued under these Regulations for conducting ground training or flight training; or
- (c) is authorised by the Authority to provide ground training, flight training, or other training under these Regulations and the Civil Aviation (Approved Training Organisations) Regulations;

“Authority” means the Civil Aviation Authority, established under section 4 of the Civil Aviation Authority Act;

“aviation repair specialist (ARS)” means a person qualified to perform or supervise the maintenance, preventive maintenance or alteration of aircraft, airframes, aircraft engines, propellers, appliances, components and parts appropriate to the designated speciality area for which the aviation repair specialist is authorised but only in connection with employment by an AMO;

“balloon” means a non-power-driven lighter-than-air aircraft;

“cabin crew member” means a crew member who performs in the interest of safety of passengers, duties assigned by the operator or the Pilot in Command of the aircraft, but who shall not act as a flight crew member;

“category II (CAT II) operations” means a precision instrument approach and landing with a decision height lower than 60m (200) Ft), but not lower than 30m (100Ft) and a RVR not less than 350m;

“category IIIA (CAT IIIA) operations” means a precision instrument approach and landing with-

- (a) a decision height lower than 30m (100Ft) or no decision height; and
- (b) a RVR not less than 200m;

“category IIIB (CAT IIIB) operations” means a precision instrument approach and landing with-

- (a) a decision height lower than 15m (50Ft) or no decision height; and
- (b) a RVR less than 200m but not less than 50m;

“category IIIC (CAT IIIC) operations mean a precision instrument approach and landing with no decision height and no runway visual range limitations;

“check pilot” means a pilot approved by the Authority who has the appropriate training, experience and demonstrated ability to evaluate and certify to the knowledge and skills of pilots;

“Contracting State” means a State that is signatory to the Convention on International Civil Aviation (Chicago Convention);

“co-pilot” means a licensed pilot serving in a piloting capacity other than as PIC, but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction;

“course” means a programme of instruction to obtain a license, rating, qualification, authorisation or recurrency required under these Regulations;

“crew resource management (CRM)” means a programme designed to improve the safety of flight operations by optimizing the safe, efficient and effective use of human resources, hardware and information through improved crew communication and co-ordination;

“critical engine” means the engine whose failure would most adversely affect the performance or handling qualities of an aircraft;

“cross country flight” means any flight during the course of which the aircraft is more than 30 nautical miles from the aerodrome of departure;

“designated medical examiner” means a person qualified and licensed in the practice of medicine, designated by the Authority to conduct medical examinations of fitness of applicants and issue reports for the issue or renewal of the licences or certificates or ratings specified in these Regulations;

“evaluator” means a person employed by a certified approved training organisation who performs tests for licensing, added ratings, authorisations and proficiency checks that are authorised by the certificate holder’s training specification and who is authorised by the Authority to administer such checks and tests;

“examiner” means a person authorised by the Authority to conduct a pilot proficiency test, a practical test for a licence or rating, or a knowledge test under these Regulations;

“facility” means a physical plant, including land, buildings and equipment, which provide the means for the performance of maintenance, preventive maintenance or modifications of any aircraft;

“flight crew member” means a licensed crew member charged with duties essential to the operation of an aircraft during flight duty period;

“flight plan” means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;

“flight time” means-

- (a) for aeroplanes and gliders, the total time from the moment an aeroplane or a glider moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight and it is synonymous with the term “block to block” or “chock to chock” time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight;
- (b) for helicopter, the total time from the moment a helicopter rotor blades start turning until the moment a helicopter comes to rest at the end of the flight and the rotor blades are stopped;
- (c) for airships or free balloon, the total time from the moment an airship or free balloon first becomes detached from the surface until the moment when it next becomes attached or comes to rest;

“glider” means a non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces, which remain fixed under given conditions of flight;

“heavier-than-air aircraft” means an aircraft deriving its lift in flight chiefly from aerodynamic forces;

“helicopter” means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axis;

“heliport” means an aerodrome or defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters;

“human performance” means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations;

“inspection” means the examination of an aircraft or aircraft component to establish conformity with a standard approved by the Authority;

“instrument approach procedure” means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix or where applicable from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or enroute obstacle clearance criteria apply;

“instrument time” means time in which cockpit instruments are used as the sole means for navigation and control;

“instrument training” means training which is received from an authorised instructor under actual or simulated instrument meteorological conditions;

“knowledge test” means a test on the aeronautical knowledge areas required for a licence or rating that can be administered in written form or by a computer;

“LAME course” means a training course for maintenance licence ratings in airframe, powerplant and avionics;

“licensed aircraft maintenance engineer” means a person licensed by the Authority to perform defined maintenance upon aircraft or aircraft components;

“lighter-than-air aircraft” means any aircraft supported chiefly by its buoyancy in the air;

“likely” means with a probability of occurring that is unacceptable to a medical assessor;

“maintenance” means tasks required to ensure the continued airworthiness of an aircraft or aircraft component including any one or combination of overhaul, repair, inspection, replacement, modification and defect rectification;

“medical assessor” means a physician qualified and experienced in the practice of aviation medicine who evaluates medical reports submitted to the Authority by medical examiners;

“medical certificate or medical assessment” means the evidence issued by the Authority that the licence holder meets specific requirements of medical fitness;

“medical examiner” means a physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed;

“night” means the time between fifteen minutes after sunset and fifteen minutes before sunrise, sunrise and sunset being determined at surface level, and includes any time between sunset and sunrise when an unlighted aircraft or other unlighted prominent object cannot clearly be seen at a distance of 4,572 metres;

“NOTAM” means Notice to Airmen;

“pilot-in-command (PIC)” means the pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight;

“PI u/s” means a co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command;

“pilot time” means that time a person-

- (a) serves as a required pilot;
- (b) receives training from an authorised instructor in an aircraft or approved synthetic flight trainer; or
- (c) gives training as an authorised instructor in an aircraft, approved synthetic flight trainer;

“powered-lift” means a heavier-than-air aircraft capable of vertical takeoff, vertical landing and low speed flight that depends principally on engine driven lift devices or engine thrust for lift during these flight regimes and on non-rotating airfoil for lift during horizontal flight;

“power plant” means an engine that is used or intended to be used for propelling aircraft, and it includes turbo superchargers, appurtenances and accessories necessary for its functioning, but does not include propellers;

“practical test” means a competency test on the areas of operations for a license, certificate, rating or authorisation that is conducted by having the applicant respond to questions and demonstrate manoeuvres in flight, in an approved synthetic flight trainer or in a combination of these;

“pressurized aircraft” means an aircraft fitted with means of controlling out flow of cabin air in order to maintain maximum cabin altitude of not more than 10,000 feet so as to enhance breathing and comfort of passengers and crew;

“problematic use of substances” means the use of one or more psychoactive substances by aviation personnel in an way that constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and causes or worsens an occupational, social, mental or physical problem or disorder;

“proficiency check” means the process of the check pilot administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period;

“propeller” means a device for propelling an aircraft that has blades on a power plant driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation and it includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of power plants;

“psychoactive substance” means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psycho stimulants, hallucinogens and volatile solvents, excluding coffee and tobacco;

“psychosis” means a mental disorder in which the individual has manifested delusions, hallucinations, grossly bizarre or disorganized behaviour or other commonly accepted symptoms of this condition; or the individual may reasonably be expected to manifest delusions, hallucinations, grossly bizarre or disorganized behaviour or other commonly accepted symptoms of this condition;

“rating” means an authorisation entered on or associated with a license or certificate and forming part of the certificate or licence, stating special conditions, privileges or limitations pertaining to such license or certificate;

“repair” means the restoration of an aircraft or aircraft component to a serviceable condition in conformity with an approved standard;

“rest period” means a period free of all restraint, duty or responsibility as specified by the Authority;

“rotorcraft” means a power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors;

“safety-sensitive personnel” means persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers;

“significant” means to a degree or of a nature that is likely to jeopardize flight safety;

“solo flight” means a flight on which a student pilot of the aircraft is the sole occupant of the aircraft;

“solo flight time” means flight time during which a student pilot is the sole occupant of the aircraft;

“specific operating provisions” means a document describing the ratings (class or limited) in detail and shall contain reference material and process specifications used in performing repair work, along with any limitations applied to an aircraft maintenance organisation;

“substance” means alcohol, sedatives, hypnotics, anxiolytics, hallucinogens, opioids, cannabis, inhalants, central nervous system stimulants such as cocaine, amphetamines and similarly acting sympathomimetics, phencyclidine or similarly acting arylcyclohexylamines and other psychoactive drugs and chemicals;

“substance abuse” means any of the following-

- (a) the use of a substance in a situation in which the use is physically hazardous, if there has been at any other time an instance of the use of a substance also in a situation in which that use was physically hazardous;
- (b) a verified positive drug test result acquired under an anti-drug programme or internal programme of a State government; or

- (c) misuse of a substance that the Authority, based on case history and qualified medical judgment relating to the substance involved, finds that it makes the applicant unable to safely perform the duties or exercise the privileges of the licence applied for or held; or may reasonably be expected, for the maximum duration of the medical certificate applied for or held, to make the applicant unable to perform those duties or exercise those privileges;

“substance dependence” means a condition in which a person is dependent on a substance, other than tobacco or ordinary xanthenes-containing beverages, as evidenced by increased tolerance; manifestation of withdrawal symptoms; impaired control of use, or continued use despite damage to physical health or impairment of social, personal or occupational functioning;

“synthetic flight trainer” means any one of the following three types of apparatus in which flight conditions are simulated on the ground-

- (a) a synthetic flight trainer which provides an accurate representation of the cockpit of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members and the performance and flight characteristics of that type of aircraft are realistically simulated;
- (b) a flight procedures trainer, which provides a realistic cockpit environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems and the performance and flight characteristics of aircraft of a particular class;
- (c) a basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the cockpit environment of an aircraft in flight in instrument flight conditions;

“training programme” means a programme that consists of courses, courseware, facilities, flight training equipment, and personnel necessary to accomplish a specific training objective and may include a core curriculum and a specialty curriculum;

“training time” means the time spent receiving from an authorised instructor flight training, ground training, or simulated flight training in an approved synthetic flight trainer; and

“Vmc” means minimum control speed with critical engine inoperative.

PART II

LICENCES, CERTIFICATION, RATINGS AND AUTHORISATIONS

Licences and certificates

3. The Authority may issue the following licences and certificates under these Regulations-

- (a) pilot licences, including-
 - (i) student pilot licence;
 - (ii) private pilot licence;
 - (iii) commercial pilot licence;
 - (iv) airline transport pilot licence;

- (b) ground instructor licence;
- (c) flight engineer licence;
- (d) air traffic controller licence;
- (e) aircraft maintenance engineer licence;
- (f) flight operations officer licence;
- (g) flight radio telephone operator licence; and
- (h) cabin crew member certificate.

Ratings issued

4. (1) The Authority may issue the following ratings for pilots-
 - (a) category ratings in the following aircraft-
 - (i) aeroplane;
 - (ii) rotorcraft;
 - (iii) glider;
 - (iv) lighter-than-air; and
 - (b) class ratings in the following aeroplanes-
 - (i) single-engine, land;
 - (ii) single-engine, sea;
 - (iii) multi-engine, land; and
 - (iv) multi-engine, sea;
 - (c) class ratings in the following rotorcraft-
 - (i) helicopters; and
 - (ii) gyroplane;
 - (d) class ratings in the following lighter-than-air aircraft-
 - (i) airship; and
 - (ii) free balloon.
 - (e) type ratings in the following aircraft-
 - (i) aircraft certificated for at least two pilots;
 - (ii) any aircraft considered necessary by the Authority;

- (iii) each type of helicopter;
- (f) instrument ratings in the following aircraft-
 - (i) instrument - aeroplane;
 - (ii) instrument – helicopter;
- (g) night rating;
- (h) flight instructor rating; and
- (i) ground instructor ratings-
 - (i) basic;
 - (ii) advanced;
 - (iii) instrument.

(2) The Authority may place the category, class or type rating on a pilot licence when issuing that licence, and the rating shall reflect the appropriate category, class or type of aircraft used to demonstrate skill and knowledge for its issue and the aircraft type is registered in Swaziland.

(3) The Authority may issue the following ratings for flight engineers-

- (a) Reciprocating engine powered including type rating;
- (b) turbo propeller powered including type rating; and
- (c) turbojet powered including type rating.

(4) The Authority may issue the following ratings for air traffic controllers-

- (a) aerodrome control;
- (b) approach control;
- (c) approach radar control;
- (d) approach precision radar control;
- (e) area control; and
- (f) area radar control.

(5) The Authority may issue the following categories without type ratings for aircraft maintenance engineer licence-

- (a) category a - aeroplane;
- (b) category c - piston engines;
- (c) category c - gas turbine engines;

- (d) category 'a' and 'c' - piston engined rotorcraft;
- (e) category 'a' and 'c' - turbine engined rotorcraft;
- (f) category 'a' and 'c' - piston engined airship;
- (g) category 'a' and 'c' - turbine engined airship;
- (h) category x - electrical;
- (i) category x - instruments;
- (j) category x - automatic pilots -aeroplanes;
- (k) category x - automatic pilots - rotorcraft;
- (l) category x - compass compensation and adjustments;
- (m) category r - radio.

(6) The Authority may issue the following type ratings for aircraft maintenance engineer licence in the following categories but excluding aeroplanes of 13,610 kg (30,000 lb) maximum take off mass (MTOM) or greater for which maintenance has to be carried out and certified under company approval-

(a) category "A" aeroplanes-

- (i) composite material aeroplanes not exceeding 5700 kg MTOM;
- (ii) wooden and combined wood and metal aeroplanes: an aeroplane where the primary structures is manufactured from wood or combinations of wood and metal;
- (iii) unpressurized aeroplanes not exceeding 2730 kg MTOM;
- (iv) pressurized aeroplanes not exceeding 2730 kg MTOM;
- (v) unpressurised aeroplanes not exceeding 5700 kg MTOM;
- (vi) pressurized aeroplanes not exceeding 5700 kg MTOW;
- (vii) unpressurised aeroplanes exceeding 5700 kg MTOM;
- (viii) pressurised aeroplanes exceeding 5700 kg MTOM;

(b) category C engines-

- (i) diesel engines in aeroplanes;
- (ii) piston engines in aeroplanes excluding diesel engines;
- (iii) gas-turbine engines in aeroplanes not exceeding 22.25 Kilo Newton (5000lbf) static thrust including where so endorsed the associated auxiliary power unit (APU) installations;

- (iv) gas-turbine engines in aeroplanes exceeding 22.25 KN (5000lbf) static thrust including where so endorsed the associated auxiliary power unit (APU) installations;
- (v) propeller turbine engines in aeroplanes including where so endorsed the associated APU installations;
- (c) category "A" and "C" rotorcraft-
 - (i) piston-engined rotorcraft;
 - (ii) turbine-engined rotorcraft not exceeding 2730 kg MTOM;
 - (iii) turbine-engined rotorcraft above 2730 kg MTOM but below 5700 kg MTOM.
- (d) category "A" and "C" airship-
 - (i) piston-engined airship;
 - (ii) turbine-engined airship;
- (e) category X – electrical-
 - (i) aircraft in which the main generation system output is direct current (dc), including alternators having self contained rectifier system and in which secondary alternators having an individual power rating not exceeding 1.5 KVA may be fitted;
 - (ii) aircraft in which the main generation system output is (dc) and which have installed "frequency wild" alternators with an individual power rating exceeding 1.5KVA for auxiliary services;
 - (iii) aircraft in which the main generation system output is "frequency wild" alternating current (ac) and (dc) power is supplied from transformer rectifier units; and
 - (iv) aircraft in which the main generation system output is constant speed drive units, or variable speed constant frequency (VSCF) generator/converter systems and direct current (dc) power is supplied from transformer rectifier units;
- (f) category X – instruments-
 - (i) general aircraft instrument systems but excluding instruments installed on any aircraft which has installed a flight director system;
 - (ii) flight director systems with air driven gyroscopes (attitudes);
 - (iii) flight director systems with electrical driven gyroscopes (attitudes);
- (g) category X -automatic pilots (aeroplanes) -
 - (i) non-radio-coupled automatic pilots;
 - (ii) radio-coupled automatic pilots;

- (h) category X -automatic pilots (rotorcraft) -
 - (i) non radio-coupled automatic pilots;
 - (ii) radio-coupled automatic pilots;
- (i) category X- compass: compass compensation and adjustment;
- (j) category R – radio-
 - (i) airborne communication and airborne navigation systems;
 - (ii) airborne radar systems.

Authorizations issued

5. (1) The Authority may issue the following authorizations under these Regulations-

- (a) category II operations;
- (b) category III operations;
- (c) flight examiner;
- (d) flight engineer instructor;
- (e) type rating instructor;
- (f) cabin crew member instructor;
- (g) medical examiner; and
- (h) aviation repair specialist (ARS).

(2) The Authority may issue the following classes for aviation repair specialists' authorization-

- (a) propellers;
- (b) computer;
- (c) instrument;
- (d) accessory;
- (e) component;
- (f) welding;
- (g) non-destructive testing; and
- (h) any other authorisation as determined by the Authority.

English language proficiency

6. (1) Within a year from the date of publication of these Regulations, a holder of a pilot licence, air traffic controller licence, flight engineer licence, flight radiotelephone operator licence shall demonstrate the ability to speak and understand English language to the level specified in the language proficiency requirements in the First Schedule.

(2) The licensed personnel specified in sub-regulation (1) who demonstrate proficiency below the expert level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level as follows-

- (a) those demonstrating language proficiency at the operational level (Level 4) shall be evaluated once every three years; and
- (b) those demonstrating language proficiency at the extended level (Level 5) shall be evaluated once every six years.

Duration of licences, certificates ratings and authorizations

7. (1) The Authority shall issue licences with a specific expiry date except as specifically provided by these Regulations.

(2) Except for an aviation repair specialist authorisation, all authorizations and ratings issued under these Regulations shall be valid for the term prescribed by the Authority but in any case not more than twelve months.

(3) An aviation repair specialist authorisation issued on the basis of employment with a specified employer, shall be valid for the term of employment of the aviation repair specialist with that employer.

(4) A student pilot licence (SPL) shall be valid-

- (a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twenty four months validity of the holder's medical certificate; or
- (b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twelve months validity of the holder's medical certificate.

(5) A private pilot licence (PPL) with an aeroplane or rotorcraft or glider category rating shall be valid-

- (a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twenty four months validity of the holder's medical certificate; or
- (b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the authority for a period of the remainder of the twelve months validity of the holder's medical certificate.

(6) A commercial pilot licence (CPL) with an aeroplane or rotorcraft category rating shall be valid-

- (a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twelve months validity of the holder's medical certificate; or
- (b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the Authority for a period of the remainder of the six month validity of the holder's medical certificate.

(7) An Airline transport pilot licence (ATPL) with an aeroplane or rotorcraft category rating shall be valid-

- (a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority, for a period of the remainder of the twelve month validity of the holder's medical certificate; or
- (b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the Authority for a period of the remainder of the six months validity of the holder's medical certificate.

(8) An instrument rating is valid for a period of twelve months from the date of the initial or renewal flight test.

(9) A night rating is valid for a period of twelve months from the date of the initial issue or renewal of the rating.

(10) A flight engineer licence is valid from the date the licence is issued or renewed by the Authority for a period of the remainder of the twelve month validity of the holder's medical certificate.

(11) A flight radio telephone operator licence is valid for a period of twenty four months from the date of issue or renewal.

(12) A flight operation officer licence is valid for a period of twelve months from the date of issue or renewal.

(13) A cabin crew member certificate is valid for twelve months from the date of issue or renewal.

(14) An aircraft maintenance engineer licence is valid for a period of twenty four months from the date of issue or renewal.

(15) A flight instructor rating is valid for a period of twelve months from the date of the instructor flight test or renewal.

(16) A ground instructor licence is valid for a period of twenty four months from the date of issue or renewal.

(17) An air traffic controller licence shall, in the case of a holder who is-

- (a) less than forty years of age, be valid from the date the licence is issued or renewed for a period of the remainder of twenty four months validity of the holder's medical certificate; or
- (b) forty years of age or more, be valid from the date the licence is issued or renewed for a period of the remainder of twelve months validity of the holder's medical certificate.

Validity of licences

8. (1) A holder of a licence shall not exercise the privileges granted by that licence or by related ratings, unless the holder maintains competency and meets the requirements for recent experience established by the Authority.

(2) The Authority shall ensure that other Contracting States are able to confirm the validity of the licence.

(3) The maintenance of competency of flight crew members engaged in commercial air transport operations may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with these Regulations.

(4) Maintenance of competency may be satisfactorily recorded in the records of the operator and in the personal logbook of the flight crew member.

(5) A flight crew member may, in lieu of maintaining competency in an aircraft, demonstrate continuing competency in synthetic flight training devices approved by the Authority.

(6) A report of medical fitness obtained in accordance with these Regulations shall be submitted to the Authority at intervals of not more than-

- (a) twenty four months for the private pilot licence (PPL) - aeroplane;
- (b) twenty four months for the PPL - helicopter or gyroplane;
- (c) twenty four months for the PPL - airship or balloon;
- (d) twenty four months for the PPL - glider;
- (e) twelve months for the commercial pilot licence (CPL) - aeroplane;
- (f) twelve months for the CPL - helicopter or gyroplane;
- (g) twelve months for the CPL - airship or balloon;
- (h) twelve months for the airline transport pilot licence (ATPL) - aeroplane;
- (i) twelve months for the ATPL - helicopter;
- (j) twelve months for the flight engineer licence;
- (k) twenty four months for the air traffic controller licence; and
- (l) twelve months for the cabin crew certificate.

(7) When a holder of ATPL - aeroplane and helicopter has passed the fortieth birthday, the twelve-month interval period specified in sub-regulation (6) shall be reduced to six months.

(8) When the holders have passed their fortieth birthday, the twenty four month interval specified in sub-regulation (6) for the PPL - aeroplane, helicopter, gyroplane, glider, airship, balloon and air traffic controller licence shall be reduced to twelve months and the twelve month interval specified in sub-regulation (6) for the CPL - aeroplane, helicopter, gyroplane, airship and balloon shall be reduced to six months.

(9) A licence or certificate issued by the Authority shall not be valid unless the holder of the licence or certificate has signed their name on the licence or certificate in ink with their ordinary signature.

Decrease in medical fitness

9. (1) A holder of licence issued under these Regulations shall not exercise the privileges of the licence and related ratings at any time when the holder is aware of any decline in medical fitness which might render the holder unable to safely and properly exercise these privileges.

(2) A licence holder shall inform the Authority of confirmed pregnancy or any decline in medical fitness of duration of more than 20 days or which requires continued treatment with prescribed medication or which requires hospital treatment.

(3) The Authority shall suspend the medical certificate of a licence holder during any period in which the Authority becomes aware that the licence holder's medical fitness has, from any cause, declined to an extent that would have prevented the issue or renewal of the licence holder's medical certificate.

(4) The suspension referred to in sub-regulation (3) shall continue until the end of the period of the decline in medical fitness or until the expiration of the medical certificate, whichever comes first.

(5) A licence holder shall not exercise the privileges of the licence and related ratings during any period in which the holder's medical fitness has, from any cause, declined to an extent that would have prevented the issue or renewal of the licence holder's medical certificate.

Deferral of medical examination

10. (1) A prescribed re-examination of a licence holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the Authority, provided that the deferment shall only be made as an exception and shall not exceed-

(a) a single period of six months in the case of a flight crew member of an aircraft engaged in non-commercial operations;

(b) two consecutive periods each of three months in the case of a flight crew member of an aircraft engaged in commercial operations, provided that in each case, a favourable medical report is obtained after examination by a medical examiner designated by the contracting state in which the applicant is situated; or

(c) in the case of a private pilot, a single period not exceeding twelve months where the medical examination is carried out by an examiner designated by the Contracting State in which the applicant is situated.

(2) For a deferral granted under sub-regulation (1) (b) and (c), a report of the medical examination shall be sent to the Authority for the licence to be renewed.

Extension of validity of medical certificate

11. The period of validity of a medical certificate may be extended at the discretion of the Authority, up to 45 days.

Curtailment of privileges-pilots

12. (1) Subject to sub-regulations (2) and (3), no person shall act as a pilot in command (PIC) of an aircraft engaged in international commercial air transport operations if that person has attained 60 years of age.

(2) A person may act as a PIC or co-pilot of a multi-crew aircraft engaged in international commercial air transport operations after attaining 60 years of age if the other pilot has not attained 60 years of age.

(3) No person shall act as a PIC or co-pilot of an aircraft of maximum certificated take-off mass of over 5,700 kg, engaged in commercial air transport operations within Swaziland if that person has attained 65 years of age.

(4) A holder of a pilot licence who has attained the age of 65 years shall not act as a pilot of an aircraft engaged in commercial air transport operations.

PART III**VALIDATION AND CONVERSION OF FOREIGN FLIGHT CREW LICENCES
AND RECOGNITION OF MILITARY QUALIFICATIONS*****Validation of licences and ratings issued on the basis of a foreign pilot or flight engineer licence***

13. (1) A person who holds a current pilot licence or flight engineer licence issued by another Contracting State may apply for and may be issued a validation certificate with the appropriate ratings, if the applicant-

- (a) is not under an order of revocation or suspension by the country that issued the licence;
- (b) holds a licence that does not contain an endorsement stating that the applicant has not met all of the standards of ICAO for that licence;
- (c) does not currently hold a pilot licence issued by the Authority;
- (d) holds a current medical certificate issued by the contracting state that issued the licence;
- (e) demonstrates the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule; and
- (f) except as the Authority may decide, otherwise passes air law, flight rules and procedures examinations.

(2) The Authority may not place upon a certificate of validation privileges beyond those granted by a foreign licence.

(3) A person who receives a certificate of validation under this regulation shall-

- (a) be limited to the privileges placed on the certificate;
- (b) be subject to the limitations and restrictions on the certificate and foreign licence when exercising the privileges of that certificate in an aircraft registered in Swaziland; and

(c) not exercise the privileges of the certificate when the person's foreign licence has been revoked or suspended.

(4) An applicant for a certificate of validation shall use only one foreign licence as a basis for obtaining a certificate of validation.

(5) An applicant for a certificate of validation under this regulation shall provide the Authority with a foreign licence and medical certificate in the English language or accompanied by an English language translation that has been signed by an official or representative of the foreign aviation authority that issued the foreign licence.

(6) The Authority shall place upon a certificate of validation the foreign licence number and country of issue.

(7) The Authority may render valid a licence issued by a foreign Contracting State for use in private flights subject to the holder passing a flight check out on the relevant class rating.

(8) Subject to sub regulation (2), the certificate of validation issued by the Authority shall be valid for a maximum period of three months in the case of operations conducted by an AOC holder.

(9) The Authority shall verify the authenticity of a foreign pilot license or flight engineer license and any ratings listed on the certificates before issuing a validation certificate or any ratings on the validation certificate.

Recognition of military or former military flight crew qualifications

14. (1) Except for a rated military or former military pilot or flight engineer who has been removed from flying status for lack of proficiency or because of disciplinary action involving aircraft operations, a rated military or former military pilot or flight engineer who meets the requirements of this regulation may apply, on the basis of the pilot's or flight engineer's military training, for-

- (a) private pilot licence (PPL), commercial pilot licence (CPL) or flight engineer licence;
- (b) an aircraft rating in the category and class of aircraft for which that military pilot or flight engineer is qualified;
- (c) an instrument rating with the appropriate aircraft rating for which that military pilot is qualified; and
- (d) a type rating, if appropriate.

(2) Subject to regulations 15 and 17 the Authority may issue to a rated military or former military pilot or flight engineer an aircraft category, class or type rating to a flight crew if that flight crew presents documentary evidence that shows satisfactory accomplishment of-

- (a) a military pilot and instrument proficiency check of Swaziland in the aircraft type in which the flight crew is rated within twelve months preceding the date of the application;
- (b) at least 10 hours of pilot in command time in that aircraft category, class, or type, if applicable, within the twelve months preceding the date of application;

- (c) a military flight engineer proficiency check in the aircraft type the flight engineer is rated within twelve months preceding the date of application; and
 - (d) at least ten hours of flight time in the aircraft type the flight engineer is rated within twelve months preceding the date of application.
- (3) A rated military pilot or former rated military pilot may apply for an aeroplane or helicopter instrument rating to be added to the pilot's CPL if the pilot has, within the twelve months preceding the date of application-
- (a) passed an instrument proficiency check by the military in the aircraft category and class for the instrument rating sought; and
 - (b) received authorisation from the military to conduct instrument flight rules (IFR) flights on airways in that aircraft category and class for the instrument rating sought.
- (4) The Authority shall issue an aircraft type rating only for aircraft types that the Authority has certified for civil operations and are registered in Swaziland.
- (5) The Authority may accept the following documents as satisfactory evidence of military pilot or flight engineer status-
- (a) an official identification card issued to the pilot or flight engineer by a military force to demonstrate service in the military;
 - (b) an original or a copy of a certificate of discharge or release from the military;
 - (c) at least one of the following-
 - (i) an order of military flight status as a military pilot or flight engineer; or
 - (ii) an order showing that the applicant graduated from a pilot or flight engineer school and received a rating as a military pilot or flight engineer;
 - (d) a certified military logbook or form showing military pilot and flight engineer status and a summary to demonstrate flight time in military aircraft;
 - (e) an official record of a military designation as pilot in command; or
 - (f) an official record of satisfactory accomplishment of an instrument proficiency check within the twelve months before the date of the application.

Conversion of Swaziland Military Pilots Qualification

15. (1) A person who holds a current Swaziland military pilot category A, B, C and D qualification may apply and be issued with a private pilot licence (PPL) or commercial pilot licence (CPL) with the appropriate ratings, if that person-

- (a) has a licence which is not under an order of revocation or suspension;
- (b) meets the minimum flying experience required under these Regulations;
- (c) holds a valid medical certificate issued by the Swaziland military; and

(d) demonstrates the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule.

(2) An applicant for a pilot licence under this regulation shall submit to the Authority a personal military flying log book or any other equivalent document that has been certified by the base commander.

(3) The applicant shall be required to have met the applicable aeronautical experience requirements for the licence or rating sought.

(4) In addition to the requirements of sub-regulations (1), (2) and (3), the applicant shall be required to pass-

(a) for CPL-

- (i) an examination for the class 1 medical certificate;
- (ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning, human performance, operational procedures, principles of flight; and
- (iii) the initial instrument rating flight test if the rating is to be included in the licence;

(b) for PPL-

- (i) an examination for the class 2 medical certificate;
- (ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony knowledge and meteorology.

(5) An applicant for a CPL or airline transport pilot licence (ATPL) is not eligible for grant of a licence unless there is an aircraft rating included in either Part I or Part II of the licence for PIC or co-pilot respectively.

(6) The Authority may consider a military type rating qualification for the purpose of conversion of CPL or ATPL, if-

- (a) the aircraft type is endorsed and certified in the applicant's military personal logbook;
- (b) the pilot is current on the aircraft type; and
- (c) the type of aircraft is registered in Swaziland.

(7) An applicant for conversion who fails the knowledge test after three consecutive attempts shall be disqualified from further testing until a period of one month has elapsed from the date on which the last test was done.

(8) The Authority shall prescribe the minimum passing grade for the knowledge test.

(9) An applicant shall be required to have passed the composite paper for conversion of a Swazi military pilot qualification within a period of six months preceding the date of the application for a licence.

Conversion of foreign pilot licences

16. (1) A person who holds a current pilot licence issued by another Contracting State may apply and be issued an equivalent licence with the appropriate ratings, if the applicant-

- (a) has a licence which is not under an order of revocation or suspension by the country that issued the licence;
- (b) meets all the ICAO standards for that licence;
- (c) holds a valid medical certificate issued by the Contracting State that issued the licence; and
- (d) demonstrates the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule.

(2) An applicant for a pilot licence under this regulation shall submit a licence and medical certificate in the English language or accompanied by an English language translation that has been signed by an official or representative of the foreign authority that issued the licence.

(3) An applicant shall meet the applicable aeronautical experience requirements.

(4) In addition to the requirements of sub-regulations (1), (2) and (3), an applicant is required to pass-

(a) for airline air transport licence (ATPL) -

- (i) the class 1 medical certificate;
- (ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony knowledge; and
- (iii) an initial instrument rating flight test;

(b) for commercial pilot's licence (CPL)-

- (i) an examination for a class 1 medical certificate;
- (ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony knowledge; and
- (iii) the initial instrument rating flight test if the rating is to be included in the licence;

(c) for private pilot's licence (PPL)-

- (i) an examination for the class 2 medical certificate;
- (ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning,

human performance, operational procedures, principles of flight and radiotelephony knowledge and meteorology; and

(d) for lighter-than-air: as in (b) or (c) as appropriate except for medical certificate where in this case it is class 2.

(5) An applicant for a CPL or ATPL is not eligible for grant of a licence unless there is included in the licence an aircraft type rating for either pilot in command or co-pilot respectively.

(6) The Authority may transfer a type rating from a foreign licence for the purpose of conversion of CPL or ATPL if-

(a) the aircraft type is endorsed on a foreign licence;

(b) the pilot is current on the aircraft type; and

(c) the type of aircraft is registered in Swaziland.

(7) An applicant for conversion who fails the knowledge test in three consecutive attempts shall be disqualified for further testing until a period of one month has elapsed from the date on which the last test was made.

(8) The Authority shall prescribe the minimum passing grade for the knowledge test.

(9) An applicant shall be required to have passed the composite paper for conversion of a foreign licence within a period of six months preceding the date of the application for the licence.

(10) The Authority shall verify the authenticity of a foreign licence, ratings and authorizations presented for conversion with the State of issue.

Conversion of flight engineer licence

17. (1) A person who holds a current flight engineer licence issued by another Contracting State may apply and be issued with an equivalent licence with the appropriate ratings, if that person-

(a) has a licence which is not under an order of revocation or suspension by the country that issued the licence;

(b) holds a licence which meets all the ICAO standards for that licence;

(c) holds a valid medical certificate class 1 issued by the Contracting State that issued the licence; and

(d) demonstrates the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule.

(2) An applicant for a flight engineer licence pursuant to this regulation shall submit the licence and medical certificate in the English language or accompanied by an English language translation that has been signed by an official or representative of the foreign authority that issued that licence.

(3) The applicant shall meet the applicable aeronautical experience requirements.

(4) In addition to the requirements of sub-regulations (1), (2) and (3) the applicant, shall be required to pass-

- (i) an examination for the medical certificate class 1; and
- (ii) the composite paper comprising of Swaziland air law, meteorology, aircraft general knowledge, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony.

(5) The Authority may transfer a type rating from a foreign licence for the purpose of conversion of flight engineer licence if-

- (a) the aircraft type is endorsed on a foreign licence;
- (b) the flight engineer is current on the aircraft type; and
- (c) the type of aircraft is registered in Swaziland.

(6) An applicant for conversion who fails the knowledge test in three consecutive attempts shall be disqualified from further testing until a period of one month has elapsed from the date on which the last test was made.

(7) The Authority shall prescribe the minimum passing grade for the knowledge test.

(8) An applicant shall be required to have passed the composite paper for conversion of a foreign licence within a period of six months preceding the date of the application for the licence.

(9) The Authority shall verify the authenticity of the foreign licence, ratings and authorisations presented for conversion with the State of issue.

PART IV

VALIDATION, CONVERSION OF FOREIGN AIRCRAFT MAINTENANCE ENGINEER LICENCES AND RATINGS AND RECOGNITION OF ENGINEER MILITARY QUALIFICATIONS

Validation of Aircraft Maintenance Engineer Licence (AMEL)

18. (1) A person who holds a current and valid aircraft maintenance engineer licence (AMEL) issued by another Contracting State may apply for and may be issued a certificate of validation with the appropriate rating, if the applicant-

- (a) holds a licence which is not under an order of revocation or suspension by the country that issued it;
- (b) holds a licence that does not contain an endorsement stating that the applicant has not met all of the standards of ICAO for that licence;
- (c) does not currently hold a licence issued by the Authority; and
- (d) demonstrates the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule.

(2) The Authority may place upon a certificate of validation privileges that are not beyond those granted by a foreign licence.

(3) A person who receives a certificate of validation under this regulation shall-

- (a) be limited to the privileges placed on the certificate;
- (b) be subject to the limitations and restrictions on the certificate and the foreign AMEL when exercising the privileges of that certificate on an aircraft registered in Swaziland; and
- (c) not exercise the privileges of the certificate when the person's foreign licence has been revoked or suspended.

(4) An applicant for a certificate of validation shall present to the Authority the foreign licence and evidence of the experience required by presenting a valid record.

(5) A certificate of validation shall be valid for a maximum period of 6 months if the foreign licence or in the case of a continuing licence, the rating remains valid.

(6) An applicant for a certificate of validation shall, unless decided otherwise by the Authority-

- (a) complete a skill test for the relevant ratings in the licence to be validated, relevant to the privileges of the licence held;
- (b) demonstrate to the satisfaction of the Authority the knowledge, relevant to the licence to be validated, of air law; and
- (c) demonstrate to the satisfaction of the Authority the knowledge, relevant to the licence to be validated of-
 - (i) relevant aircraft maintenance principles; and
 - (ii) human performance.

(7) The Authority shall verify the authenticity of the foreign licence, ratings and authorisations presented for validation with the State of issue.

Conversion of foreign AMEL

19. (1) A person who holds a current aircraft maintenance engineer licence (AMEL) issued by another Contracting State may apply and be issued with an equivalent licence with the appropriate ratings, if the applicant-

- (a) has a licence which is not under an order of revocation or suspension by the country that issued the licence;
- (b) holds a licence which meets all the ICAO standards for that licence;
- (c) is able to read, speak, write and understand the English language.

(2) An applicant for an AMEL under this regulation shall submit the licence in the English language or accompanied by an English language translation that has been signed by an official or representative of the foreign authority that issued the licence.

(3) An applicant shall meet the applicable aeronautical experience requirements specified under these Regulations.

(4) In addition to the requirements of sub-regulations (1), (2) and (3), the applicant shall pass a knowledge test in-

- (a) air law; and
- (b) a composite paper comprising of subjects required for the initial issue of a category and rating sought.

(5) The Authority may transfer a type rating from a foreign licence for the purpose of conversion of AMEL if-

- (a) the aircraft type is endorsed on a foreign licence;
- (b) that applicant is current on the aircraft type; and
- (c) the type of aircraft is registered in Swaziland.

(6) An applicant for conversion who fails the knowledge test shall be disqualified for further testing until after a proven practical experience of one month is gained.

(7) The Authority shall prescribe the minimum passing grade for the knowledge test.

(8) An applicant shall be required to have passed air law and a composite paper for conversion of a foreign licence within a period of six months preceding the date of the application for the licence.

(9) The Authority shall verify the authenticity of the foreign licence, ratings and authorizations presented for conversion with the State of issue.

Recognition of military aircraft maintenance personnel qualifications

20. (1) A military aircraft maintenance personnel may apply to the Authority for issue of aircraft maintenance engineer licence (AMEL) without type rating on the basis of military qualifications.

(2) The application shall be accompanied by-

- (a) a certificate of discharge from military service;
- (b) evidence of experience of six years in aircraft maintenance of which six months of recent experience shall have been acquired within the twelve months preceding the application; and
- (c) a certificate, diploma or such other document showing proof of training in aircraft maintenance.

(3) If the Authority is satisfied that the applicant meets the conditions in sub-regulations (2), the Authority shall require the applicant to demonstrate the knowledge and skill requirements for AMEL stipulated in these Regulations.

PART V
GENERAL REQUIREMENTS: TESTING AND TRAINING
FOR PILOT LICENCES, RATINGS AND AUTHORISATIONS

Knowledge test: prerequisites and passing grades

21. (1) An applicant for a knowledge test shall have-

- (a) received an endorsement from an authorized instructor certifying that the applicant has accomplished a ground-training required by these Regulations for the licence or rating sought and is prepared for the knowledge test; and
- (b) proper identification at the time of taking the test that includes the applicant's-
 - (i) photograph;
 - (ii) name;
 - (iii) signature;
 - (iv) date of birth, which shows that the applicant meets or will meet the age requirements of these Regulations for the licence sought before the expiry date of the applicant's knowledge test report; and
 - (v) mailing address.

(2) The Authority shall specify the minimum passing grade for the knowledge test.

(3) The validity of the knowledge test results for an applicant for a pilot licence shall be as follows-

- (a) for private pilot licence (PPL) - six months after passing the test;
- (b) for commercial pilot licence (CPL) - eighteen months after passing the test; and
- (c) for airline transport pilot licence (ATPL) - five years after passing the test.

Practical tests: prerequisite for flight crew

22. (1) To be eligible for a practical test, an applicant shall meet all applicable requirements for the licence or rating sought.

(2) If an applicant for a practical test does not-

- (a) complete all increments of a practical test for a licence or rating in one day, that applicant shall complete all remaining increments of the test not more than sixty days after that date; and
- (b) satisfactorily complete all increments of the practical test for a licence or a rating within sixty days after beginning the test, that applicant shall retake the entire practical test, including those increments satisfactorily completed.

(3) Except as provided in sub-regulation (4), to be eligible for a practical test for a licence or rating issued under these Regulations, an applicant for a practical test shall-

- (a) pass the required knowledge test for the type rating within six months preceding the month the applicant completes the practical test;
 - (b) present the knowledge test report at the time of application for the practical test, if a knowledge test is required;
 - (c) have satisfactorily accomplished the required training and obtained the aeronautical experience prescribed by these Regulations for the licence or rating sought;
 - (d) meet the prescribed age requirement of these Regulations for the issue of the licence or rating sought; and
 - (e) have an endorsement in the applicant's logbook or training record that has been signed by an authorised instructor who certifies that the applicant-
 - (i) has received and logged training time within sixty days preceding the date of application in preparation for the practical test;
 - (ii) is prepared for the required practical test; and
 - (iii) has demonstrated satisfactory knowledge of the subject areas in which the applicant was deficient on the knowledge test.
- (4) An applicant for an airline transport pilot licence may take the practical test for that licence within two years of the expiration of a knowledge test, if the applicant-
- (a) has been continuously employed as a flight crew member by an air operator certificate (AOC) holder from the time the knowledge test expired; and
 - (b) has satisfactorily accomplished the AOC holder's approved-
 - (i) pilot-in-command aircraft qualification training programme that is appropriate to the licence; and
 - (ii) qualification training requirements appropriate to the licence and rating sought.

Practical tests: general requirements for flight crew

23. (1) The ability of an applicant for a practical test to hold a pilot licence or rating shall be determined based upon the applicant's ability to safely, during a practical test-

- (a) perform the tasks specified in the areas of operation for the licence or rating sought within the prescribed standards;
- (b) demonstrate mastery of the aircraft with the successful outcome of each task regarding-
 - (i) private pilot licence and commercial pilot licence, licence tests; and
 - (ii) airline transport pilot licence and aircraft type rating tests;
- (c) demonstrate sound judgement; and
- (d) demonstrate single-pilot competence if the aircraft is type certified for single-pilot operations.

(2) An applicant who fails any area of operation shall have failed the practical test and is not eligible for a licence or rating sought.

(3) The examiner or the applicant may discontinue a practical test at any time-

- (a) when the applicant fails one or more of the areas of operation; or
- (b) due to inclement weather conditions, aircraft airworthiness concerns or any other safety-of-flight concern.

(4) If a practical test is discontinued, the Authority may give the applicant credit for those areas of operation already passed, but only if the applicant-

- (a) passes the remainder of the practical test within the sixty day period after the date the practical test was begun;
- (b) presents to the examiner for the retest the original test report or the discontinuance form prescribed by the Authority as appropriate; and
- (c) satisfactorily accomplishes any additional training needed and obtains the appropriate instructor endorsements, if additional training is required.

(5) The validity of the practical test results for applicants for a pilot licence and type rating shall be six months after passing the test.

Practical tests: required aircraft and equipment

24. (1) Except when permitted to accomplish the entire flight increment of the practical test in an approved synthetic flight trainer, an applicant for a licence or rating issued under these Regulations shall provide an aircraft registered in Swaziland for each required test that-

- (a) is of the category, class and type, if applicable, applicable to the licence or rating sought; and
- (b) has a certificate of airworthiness.

(2) An applicant for a practical test shall use an aircraft that has-

- (a) the equipment for each area of operation required for the practical test;
- (b) no prescribed operating limitations that prohibit the aircraft's use in any of the areas of operation required for the practical test;
- (c) except as provided in sub-regulation (5), at least two pilot stations with adequate visibility for each person to operate the aircraft safely; and
- (d) cockpit and outside visibility adequate to evaluate the performance of the applicant when an additional jump seat is provided for the examiner.

(3) An applicant for a practical test shall use an aircraft, other than a lighter-than-air aircraft, that has engine power controls and flight controls that are easily reached and operable in a conventional manner by both pilots, unless the examiner determines that the practical test can be conducted safely in the aircraft without the controls being easily reached.

(4) An applicant for a practical test that involves manoeuvring an aircraft solely by reference to instruments shall provide an aircraft with-

- (a) equipment that permits the applicant to pass the areas of operation that apply to the rating sought; and
 - (b) a device that prevents the applicant from having visual reference outside the aircraft, but does not prevent the examiner from having visual reference outside the aircraft, and is otherwise acceptable to the Authority.
- (5) An applicant may complete a practical test in an aircraft having a single set of controls, if-
- (a) the examiner agrees to conduct the test;
 - (b) the test does not involve a demonstration of instrument skills; and
 - (c) the proficiency of the applicant can be observed by an examiner who is in a position to observe the applicant.

Retesting after failure

25. (1) An applicant for a knowledge or practical test who fails that test may reapply for the test only after the applicant has received-

- (a) the necessary training from an authorized instructor who has determined that the applicant is proficient to pass the test; and
- (b) an endorsement from an authorised instructor who gave the applicant the additional training.

(2) An applicant for a flight instructor licence with an aeroplane category rating or, for a flight instructor licence with a glider category rating, who has failed the practical test due to deficiencies in instructional proficiency on stall awareness, spin entry, spins or spin recovery shall-

- (a) comply with the requirements of sub-regulation (1) before being retested;
- (b) bring to the retest an aircraft that is of the appropriate aircraft category for the rating sought and is certified for spins; and
- (c) demonstrate satisfactory instructional proficiency on stall awareness, spin entry, spins and spin recovery to an examiner during the retest.

Records of training time

26. A person shall document and record the following time in a manner acceptable to the Authority-

- (a) training and aeronautical experience used to meet the requirements for a licence, rating, qualification or authorisation of these Regulations; and
- (b) the aeronautical experience required to show recent flight experience requirements of these Regulations.

(2) For the purposes of meeting the requirements of these Regulations, a person shall enter the following information for each flight or lesson logged

(a) *general-*

- (i) date;
- (ii) total flight time;
- (iii) location where the aircraft departed and arrived or for lessons in an approved synthetic flight trainer, the location where the lesson occurred;
- (iv) type and identification of aircraft or approved synthetic flight trainer, as appropriate;
- (v) the name of a safety pilot, if required by the Civil Aviation Operation of Aircraft) Regulations; and
- (vi) the name of the authorised instructor if required;

(b) *type of pilot experience or training-*

- (i) solo;
- (ii) pilot-in-command (PIC);
- (iii) PIC under supervision (U/S);
- (iv) co-pilot;
- (v) flight and ground training received from an authorised instructor; and
- (vi) training received in an approved synthetic flight trainer from an authorised instructor;

(c) *conditions of flight-*

- (i) day or night;
- (ii) actual instrument; and
- (iii) *simulated instrument conditions in flight or in an approved synthetic flight trainer.*

(3) The pilot time described in this regulation may be used to apply for a licence or rating issued under these Regulations or satisfies the recent flight experience requirements of the Civil Aviation Authority (Operation of Aircraft) Regulations.

(4) Except for a student pilot acting as PIC of an airship requiring more than one flight crew member, a pilot may log as solo flight time only that flight time when the pilot is the sole occupant of the aircraft.

(5) A private or commercial pilot may log PIC time only for that flight time during which that person is-

- (a) the sole manipulator of the controls of an aircraft for which the pilot is rated; or
- (b) acting as PIC of an aircraft on which more than one pilot is required; or

(c) a sole occupant.

(6) An airline transport pilot may log as PIC time all of the flight time while acting as PIC of an operation requiring an ATPL.

(7) An authorised instructor may log as PIC time all flight time while acting as an authorised instructor.

(8) A student pilot may log PIC time when that student pilot is the sole occupant of the aircraft and is undergoing training for a pilot licence or rating.

(9) A person may log co-pilot flight time only for that flight time during which that person-

(a) is qualified in accordance with the co-pilot requirements of the Civil Aviation Authority (Operation of Aircraft) Regulations and occupies a crew member station in an aircraft that requires more than one pilot by the type certificate of the aircraft; or

(b) holds the appropriate category, class and instrument rating if an instrument rating is required for the flight, for the aircraft being flown and more than one pilot is required under the type certification of aircraft.

(10) A person may log instrument flight time only for that flight time when that person operates the aircraft solely by reference to instruments under actual or simulated instrument flight conditions.

(11) An authorised instructor may log instrument flight time when conducting instrument flight instruction in actual instrument flight conditions.

(12) For the purposes of logging instrument flight time to meet the recent instrument experience requirements of the Civil Aviation Authority (Operation of Aircraft) Regulations, the following information shall be recorded in a person's logbook-

(a) the location and type of each instrument approach accomplished; and

(b) the name of the safety pilot, if required.

(13) An approved synthetic flight trainer may be used by a person to log instrument flight time if an authorised instructor is present during the simulated flight.

(14) A person may log training time when that person receives training from an authorised instructor in an aircraft or in an approved synthetic flight trainer.

(15) The training time shall be logged in a logbook and shall-

(a) be endorsed in a legible manner by the authorised instructor; and

(b) include a description of the training given, the length of the training lesson and the instructor's signature, licence number and licence expiry date.

Limitations on the use of synthetic flight trainer

27. No person shall receive credit for use of any synthetic flight trainer for satisfying any training testing, or checking requirement of this regulation unless the synthetic flight trainer is approved by the Authority for-

- (a) training, testing, and checking for which it is used;
- (b) each particular manoeuvre, procedure or crew member function performed; and
- (c) the representation of the specific category and class of aircraft, type of aircraft, particular variation within the type of aircraft or set of aircraft for certain flight training devices.

Use of a synthetic flight trainer for demonstration of skill

28. (1) A use of a synthetic flight trainer used for performing any manoeuvre required during the demonstration of skill for the issue of a flight crew licence or rating shall be approved by the Authority to ensure that the synthetic flight trainer used is appropriate to the task.

(2) To maintain the competence required by these Regulations, a flight crew member may demonstrate skills during proficiency flight checks in a synthetic flight trainer approved under sub regulation (1).

General requirements for pilots licences, ratings and authorizations

29. (1) The Authority may issue to an applicant who cannot comply with certain eligibility requirements or areas of operations required for the issue of a licence because of physical limitations, or for other reasons, a licence, rating or authorisation with appropriate limitations for operations only within Swaziland if-

- (a) the applicant is able to meet all other certification requirements for the licence, rating or authorisation sought;
- (b) physical limitation, if any, has been recorded with the Authority on the medical records of the applicant; and
- (c) the Authority determines that the inability of the applicant to perform the particular area of operation shall not adversely affect safety.

(2) The Authority may remove a limitation placed on a person's licence if that person demonstrates to an examiner or inspector satisfactory proficiency in the area of operation to which the limitation applies or otherwise shows compliance with conditions to remove the limitation, as applicable.

(3) No person shall act as the pilot in command of an aircraft unless that person holds the appropriate category, class and type rating if a class rating, and type rating is required for the aircraft to be flown, except where the pilot is receiving training for the purpose of obtaining an additional pilot licence or rating while under the supervision of an authorised instructor.

(4) No person shall act as a pilot of an aircraft that is carrying another person or is operated for compensation or hire, unless that pilot holds a category, class and type rating that applies to the aircraft.

(5) Sub-regulation (4) does not require a category and class rating for an aircraft not type certified as an aeroplane, rotorcraft, glider or lighter-than-air aircraft.

(6) No person shall act as PIC of a complex aircraft, high-performance aircraft or a pressurized aircraft capable of flying 25,000 feet above sea level, or an aircraft that the Authority has determined requires aircraft type specific training unless the person has-

- (a) received and logged ground and flight training from an authorised instructor in the applicable aircraft type or in an approved synthetic flight trainer that is a representative of that aircraft and has been found proficient in the operation and systems of that aircraft; and
 - (b) received an endorsement in the pilot's logbook from an authorised instructor who certifies the person is proficient to operate that aircraft.
- (7) No person shall act as PIC of a tail wheel aeroplane unless that person has-
- (a) received and logged flight training from an authorised instructor in a tail wheel aeroplane on the manoeuvres and procedures listed; and
 - (b) received an endorsement in the person's logbook from an authorised instructor who is satisfied that the person is proficient in the operation of a tail wheel aeroplane, to include at least normal and crosswind takeoffs and landings, wheel landings (unless the manufacturer has recommended against such landings) and go around procedures.

PART VI PILOT LICENCES

STUDENT PILOT LICENCE

Eligibility requirements

30. (1) To be eligible to receive and log flight instructions, a person must be in possession of a valid student pilot licence (SPL).
- (2) To be eligible for issue of SPL, an applicant shall-
- (a) be at least seventeen years of age for a licence other than the operation of a glider, airship or balloon;
 - (b) be at least sixteen years of age for the operation of a glider or balloon;
 - (c) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule; and
 - (d) be in possession of a valid class 2 medical certificate issued under these Regulations.

Solo flight requirements

31. (1) A holder of a student pilot licence (SPL) shall not operate an aircraft in first solo flight unless that student has met the requirements of this regulation.
- (2) A student pilot shall pass an aeronautical knowledge test in the following subjects-
- (a) applicable sections of these Regulations and the Civil Aviation Authority (Operation of Aircraft) Regulations;
 - (b) airspace structure and procedures for the airport where the student will perform solo flight; and
 - (c) flight characteristics and operational limitations for the make and model of aircraft to be flown.

(3) The authorized instructor of a student shall-

- (a) administer the test; and
- (b) at the conclusion of the test, review all incorrect answers with the student before authorizing that student to conduct a solo flight.

(4) Prior to conducting a solo flight, a student pilot shall have-

- (a) received and logged flight training for the manoeuvres and procedures of this regulation that are appropriate to the make and model of aircraft to be flown; and
- (b) demonstrated satisfactory proficiency and safety, as judged by an authorised instructor, on the manoeuvres and procedures required by this regulation in the make and model of aircraft or similar make and model of aircraft to be flown.

(5) A student pilot who is receiving training for solo flight shall receive and log flight training for the required manoeuvres and procedures, including the following as applicable, for each category and class rating-

- (a) proper flight preparation procedures, including pre-flight planning and preparation, engine operation and aircraft systems;
- (b) taxiing or surface operations, including run-up's;
- (c) takeoffs and landings, including normal and crosswind;
- (d) straight and level flight and turns in both directions;
- (e) climbs and climbing turns;
- (f) airport traffic patterns;
- (g) radio telephony, airport entry and departure procedures;
- (h) collision avoidance, wind shear avoidance and wake turbulence avoidance;
- (i) descents, with and without turns, using high and low drag configurations;
- (j) flight at various airspeeds from cruise to slow flight;
- (k) entries from various flight altitudes and power combinations with recovery initiated at the first indication of a stall and recovery from a full stall;
- (l) emergency procedures and equipment malfunctions;
- (m) ground reference manoeuvres;
- (n) approaches to a landing area with simulated engine malfunctions;
- (o) slips to a landing; and
- (p) go-arounds.

(6) A holder of student pilot licence who is receiving training for solo flight shall receive and log flight training for the following additional manoeuvres and procedures, as applicable, as indicated for each category and class rating-

(a) in a multiengine aeroplane-

- (i) proper flight preparation procedures, including pre-flight planning and preparation, powerplant operation and aircraft systems;
- (ii) taxiing or surface operations, including run-up's;
- (iii) takeoffs and landings, including normal and crosswind;
- (iv) straight and level flight and turns in both directions;
- (v) climbs and climbing turns;
- (vi) airport traffic patterns, including entry and departure procedures;
- (vii) collision avoidance, wind shear avoidance and wake turbulence avoidance;
- (viii) descents, with and without turns, using high and low drag configurations;
- (ix) flight at various airspeeds from cruise to slow flight;
- (x) stall entries from various flight attitudes and power combinations with recover initiated at the first indication of a stall and recovery from a full stall;
- (xi) emergency procedures and equipment malfunctions;
- (xii) ground reference manoeuvres;
- (xiii) approaches to a landing area with simulated engine malfunctions; and
- (xiv) go-arounds;

(b) in a helicopter-

- (i) approach to the landing area;
- (ii) hovering and hovering turns;
- (iii) simulated emergency procedures, including auto-rotational descents with a power recovery and power recovery to a hover;
- (iv) rapid decelerations; and
- (v) simulated one-engine-inoperative approaches and landings for multiengine helicopter;

(c) in a gyroplane-

- (i) approach to the landing area;
- (ii) high rates of descent with power on and with simulated power off, and recovery from those flight configurations; and

- (iii) simulated emergency procedures, including simulated power-off landings and simulated power failure during departures;
- (d) in a glider-
 - (i) the applicable manoeuvres and procedures shown in paragraph (a);
 - (ii) launches, including normal and crosswind;
 - (iii) inspection of towline rigging and review of signals and release procedures;
 - (iv) aero tow, ground tow, or self-launch procedures;
 - (v) procedures for disassembly and assembly of the glider;
 - (vi) slips to a landing;
 - (vii) procedures and techniques for thermalling; and
 - (viii) emergency operations, including towline break procedures;
- (e) in an airship-
 - (i) rigging, ballasting and controlling pressure in the ballonets, and superheating; and
 - (ii) landings with positive and with negative static trim;
- (f) in a balloon-
 - (i) layout and assembly procedures;
 - (ii) ascents and descents;
 - (iii) landing and recovery procedures;
 - (iv) operation of hot air or gas source, ballast, valves, vents and rip panels, as appropriate;
 - (v) use of deflation valves or rip panels for simulating an emergency;
 - (vi) the effects of wind on climb and approach angles; and
 - (vii) obstruction detection and avoidance techniques.

Privileges and Limitations

32. (1) A holder of a student pilot licence shall be entitled to fly as a PIC of an aircraft for the purpose of becoming qualified for a grant or renewal of a pilot's licence.

(2) A holder of a student pilot licence (SPL) shall not act as pilot in command (PIC) of an aircraft-

- (a) that is carrying a passenger;
- (b) that is carrying property for compensation or hire;
- (c) that is operated for compensation or hire;
- (d) in furtherance of a business;
- (e) on an international flight;
- (f) when the flight cannot be made under visual meteorological conditions (VMC) as specified under the Civil Aviation Authority (Rules of the Air and Air Traffic Control) Regulations; or
- (g) in a manner contrary to any limitations placed in the logbook of the pilot by an authorized instructor.

(3) A holder of a SPL shall not act as a required flight crew member on any aircraft for which more than one pilot is required by the aircraft type certificate or by these Regulations under which the flight is conducted, except when receiving flight training from an authorised instructor on board an airship, and no person other than a required flight crew member is carried on the airship.

(4) A holder of an SPL shall not operate an aircraft in solo flight unless that student pilot has received within the ninety days preceding the date of the flight an endorsement made in the student's logbook from an authorised instructor for the specific make and model of aircraft to be flown.

(5) A holder of an SPL shall not act as a PIC of an aircraft unless the SPL's logbook has been endorsed by an authorised instructor that the SPL is capable of communicating with air traffic control on radiotelephony.

Solo flight cross country requirements

33. (1) Except as provided in sub-regulation (4), a holder of a student pilot licence (SPL) shall meet the requirements of this regulation before-

- (a) conducting a solo cross-country flight, or any flight greater than twenty five nautical miles from the airport from where the flight originated; or
- (b) making a solo flight and landing at any location other than the airport of origin.

(2) Except as provided in sub-regulation (4), a student pilot who seeks solo cross-country flight privileges shall-

- (a) have received flight training from an authorised instructor on the manoeuvres and procedures required by this regulation that are appropriate to the make and model of aircraft for which solo cross-country privileges are sought;
- (b) have demonstrated cross-country proficiency on the appropriate manoeuvres and procedures required by this regulation to an authorised instructor;
- (c) have satisfactorily accomplished the pre-solo flight manoeuvres and procedures required by this regulation in the make and model of aircraft or similar make and model of aircraft for which solo cross-country privileges are sought; and

- (d) comply with any limitations included in the instructor's endorsement that are required by sub-regulation (5).

(3) A holder of an SPL who seeks solo cross-country flight privileges must have received ground and flight training from an authorised instructor on the cross-country manoeuvres and procedures listed in this regulation that are appropriate to the aircraft to be flown.

(4) A student pilot shall obtain an endorsement from an authorised instructor to make solo flights, subject to the following conditions-

- (a) a student pilot may make solo flights to another airport that is within 25 nautical miles from the airport where the student pilot normally receives training if-
 - (i) the authorised instructor who makes the endorsement gave the student pilot flight training at the other airport and that training included flight in both directions over the route, entering and exiting the traffic pattern, and takeoffs and landings at the other airport;
 - (ii) the student pilot has a current solo flight endorsement in accordance with these Regulations;
 - (iii) the instructor has determined that the student pilot is proficient to make the flight; and
 - (iv) the purpose of the flight is to practice takeoffs and landings at that other airport;
- (b) a student pilot may make repeated specific solo cross-country flights to another airport that is within 50 nautical miles of the airport from which the flight originated, if-
 - (i) the authorised instructor who gave the endorsement gave the student flight training in both directions over the route; including entering and exiting the traffic patterns, takeoffs and landings at the airport to be used;
 - (ii) the student has current solo flight endorsements in accordance with these Regulations; and
 - (iii) the student has a current solo cross-country flight endorsement in accordance with sub-regulation (5), except that separate endorsements are not required for each flight made under this paragraph.

(5) Except as specified in sub-regulation (4)(b), a student pilot shall have a solo cross-country endorsement placed in the student pilot's log book by the authorised instructor who conducted the training for each make and model aircraft the student will fly on each cross-country flight.

(6) A student pilot who is receiving training for cross-country flight shall receive and log flight training in the following manoeuvres and procedures-

- (a) in an aeroplane or rotorcraft-
 - (i) use of aeronautical charts for visual flight rules navigation using pilotage and dead reckoning with the aid of a magnetic compass;
 - (ii) use of aircraft performance charts pertaining to cross-country flight;

- (iii) procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight;
 - (iv) recognition, avoidance, and operational restrictions of hazardous terrain features in the geographical area where the student pilot will conduct cross-country flight;
 - (v) use of radios for visual flight rules (VFR) navigation and two-way communications;
 - (vi) climbs at best angle and best rate; and
 - (vii) control and manoeuvring solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids and air traffic control clearances;
- (b) in a glider-
- (i) the manoeuvres and procedure specified in sub-regulation (6) (a), as applicable;
 - (ii) landings accomplished without the use of the altimeter from at least 2000 feet above the surface; and
 - (iii) recognition of weather and upper air conditions favourable for cross-country soaring, ascending flight, descending flight, and altitude control;
- (c) in an airship-
- (i) the manoeuvres and procedures specified in sub-regulation (6) (a), as applicable;
 - (ii) control of air pressure with regard to ascending and descending flight and altitude control;
 - (iii) control of the airship solely by reference to flight instruments; and
 - (iv) recognition of weather and upper air conditions conducive for the direction of cross-country flight.

Renewal requirements

34. A holder of an SPL may apply for renewal of the licence if the holder has passed a Class II medical examination.

Private Pilot Licence

Eligibility requirements

35. An applicant for a private pilot licence (PPL), shall-

- (a) be at least seventeen years of age for a licence other than the operation of glider or balloon;
- (b) be at least 16 years of age for a licence in a glider or balloon;

- (c) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule;
- (d) receive an endorsement for the knowledge test from an authorised instructor who-
 - (i) conducted the training on the aeronautical knowledge areas listed in regulation 36, that apply to the aircraft category sought; and
 - (ii) certified that the person is prepared for the required knowledge test;
- (e) be in possession of a valid class 2 medical certificate issued under these Regulations;
- (f) pass the required knowledge test on the aeronautical knowledge areas listed in regulation 36;
- (g) receive flight training and a logbook endorsement from an authorised instructor who-
 - (i) conducted the training in the areas of operation listed in regulation 37, that apply to the aircraft category and class rating sought; and
 - (ii) certified that the person is prepared for the required practical test;
- (h) meet the aeronautical experience requirements that apply to the aircraft category and class rating sought before applying for the practical test;
- (i) pass a practical test on the areas of operation listed in regulation 37 that apply to the aircraft category and class rating sought; and
- (j) comply with the appropriate provisions of these Regulations that apply to the aircraft category and class rating sought.

Aeronautical knowledge requirements

36. (1) Subject to sub-regulation (2) an applicant for a private pilot licence (PPL) shall receive and log ground training from an authorised instructor on the aeronautical knowledge areas that apply to the aircraft category and class rating sought.

(2) The aeronautical knowledge areas applicable to any relevant aeroplane category and class rating shall be as follows-

- (a) air law-rules and regulations relevant to the holder of a PPL, rules of the air, appropriate air traffic services practices and procedures;
- (b) aircraft general knowledge-
 - (i) principles of operation of aircraft powerplants, systems and instruments;
 - (ii) operating limitations of aircraft and powerplants; relevant operational information from the flight manual or other appropriate document;
- (c) flight performance and planning-
 - (i) effects of loading and mass distribution on flight characteristics; mass and balance calculations;

- (ii) use and practical application of take-off, landing and other performance data;
 - (iii) pre-flight and en-route flight planning appropriate to private operations under VFR; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; position reporting procedures; altimeter setting procedures; operations in areas of high-density traffic;
 - (d) human performance- human performance relevant to the PPL;
 - (e) meteorology- application of elementary aeronautical meteorology, use of, and procedures for obtaining, meteorological information, altimetry;
 - (f) navigation- practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;
 - (g) operational procedures-
 - (i) use of aeronautical documentation such as Aeronautical Information Publication (AIP), NOTAM, aeronautical codes and abbreviations;
 - (ii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;
 - (h) principles of flight-principles of flight relating to aircraft;
 - (i) radiotelephony- radiotelephony procedures and phraseology as applied to VFR operations and action to be taken in case of communication failure.
- (3) The aeronautical knowledge areas applicable to any relevant rotorcraft category and class rating shall include all areas covered under sub-regulation (2) and settling with power, ground resonance, roll over and other operating hazards.
- (4) The aeronautical knowledge areas applicable to any relevant lighter than air category and class rating shall be as follows-
- (a) air law rules and regulations relevant to the holder of a lighter than air category; rules of the air; appropriate air traffic services practices and procedures;
 - (b) aircraft general knowledge-
 - (i) principles of operation of lighter than aircraft category systems and instruments;
 - (ii) operating limitations of lighter than air aircraft category, relevant operational information from the flight manual or other appropriate document;
 - (iii) physical properties and practical application of gases used in lighter than air aircraft category;
 - (d) flight performance and planning-
 - (i) effects of loading on flight characteristics, mass and balance calculations;
 - (ii) use and practical application of launching, landing and other performance data, including the effect of temperature;

- (iii) pre-flight and en-route flight planning appropriate to operations under VFR, appropriate air traffic services procedures; altimeter setting procedures and operations in areas of high-density traffic;
- (e) human performance-human performance relevant to lighter than aircraft category pilot;
- (f) meteorology-application of elementary aeronautical meteorology, use of, and procedures for obtaining meteorological information and altimetry;
- (g) navigation-practical aspects of air navigation and dead-reckoning techniques and use of aeronautical charts;
- (h) operational procedures-
 - (i) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
 - (ii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;
- (h) principles of flight- principles of flight relating to lighter than aircraft category.

Flight instruction requirements

37. An applicant for a private pilot licence (PPL) shall receive and log ground and flight training from an authorised instructor on the following areas of operation-

- (a) for all categories and class ratings, as applicable-
 - (i) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
 - (ii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (iii) control of the aeroplane by external visual reference;
 - (iv) flight at critically slow airspeeds, recognition of, and recovery from, incipient and full stalls;
 - (v) flight at critically high airspeeds, recognition of, and recovery from, spiral dives;
 - (vi) normal and cross-wind take-offs and landings;
 - (vii) maximum performance (short field and obstacle clearance) take-offs and short- field landings;
 - (viii) flight by reference solely to instruments, including the completion of a level 180° turn;
 - (ix) cross-country flying using visual reference, dead reckoning and where available, radio navigation aids;

- (x) emergency operations, including simulated aeroplane equipment malfunctions; and
 - (xi) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology;
- (b) for aeroplane category rating, with a multi engine class rating, the areas covered in paragraph (a) and in addition the following requirements-
- (i) emergency operations, including the applicant's knowledge and performance of the following tasks-
 - (aa) emergency descent;
 - (bb) engine failure during take-off before V_{mc} ;
 - (cc) engine failure after lift-off (simulated);
 - (dd) approach and landing with an inoperative engine (simulated); and
 - (ii) multi-engine operations, including the applicant's knowledge and performance of the following tasks-
 - (aa) manoeuvring with one engine inoperative;
 - (bb) V_{mc} demonstration; and
 - (cc) engine failure during flight (by reference to instruments);
- (c) for rotorcraft category rating with a helicopter class rating, the areas covered in paragraph (a) and in addition the following-
- (i) control of the helicopter by external visual reference;
 - (ii) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
 - (iii) round manoeuvring and run-ups; hovering; take-offs and landings-normal, out of wind and sloping ground;
 - (iv) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
 - (v) cross-country flying using visual reference, dead reckoning and where available, radio navigation aids, including a flight of at least one hour;
 - (vii) emergency operations, including simulated helicopter equipment malfunctions; autorotative approach and landing;
- (d) for rotorcraft category rating with a gyroplane class rating, the areas covered in paragraph (a) and in addition flight at slow airspeeds;
- (e) for glider category rating the following areas-

- (i) pre-flight operations, including glider assembly and inspection;
 - (ii) techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures and signals used;
 - (iii) traffic pattern operations, collision avoidance precautions and procedures;
 - (iv) control of the glider by external visual reference;
 - (v) flight throughout the flight envelope;
 - (vi) recognition of and recovery from, incipient and full stalls and spiral dives;
 - (vii) normal and cross-wind launches, approaches and landings;
 - (viii) cross-country flying using visual reference and dead reckoning; and
 - (ix) emergency procedures;
- (f) for lighter-than-air category and class rating the following areas-
- (i) pre-flight operations, including balloon assembly, rigging, inflation, mooring and inspection;
 - (ii) techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;
 - (iii) collision avoidance precautions;
 - (iv) control of a free balloon by external visual reference;
 - (v) recognition of, and recovery from, rapid descents;
 - (vi) cross-country flying using visual reference and dead reckoning;
 - (vii) approaches and landings, including ground handling; and
 - (viii) emergency procedures.

Aeronautical experience requirements

38. (1) An applicant for a private pilot licence (PPL) with an aeroplane category rating shall have completed-

- (a) for a single engine class rating for each category rating sought-
 - (i) not less than 40 hours of flight time as pilot of aeroplanes, a total of 5 hours may have been completed in a synthetic flight trainer; and
 - (ii) not less than 10 hours of solo flight time under the supervision of an authorized flight instructor, including 5 hours of solo cross country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made;

(b) for a multi engine class rating for each category sought, in addition to the requirements of paragraph (a)-

(i) not less than 10 hours under the supervision of an authorised flight instructor in the category sought; and

(ii) pass a practical skill test on multi-engine aircraft as specified in regulation 23.

(2) An applicant for a private pilot licence (PPL) with rotorcraft category rating shall have completed, for a single engine rotorcraft type rating-

(a) not less than 40 hours of flight time as pilot of aeroplanes, a total of 5 hours may have been completed in a synthetic flight trainer; and

(b) not less than 10 hours of solo flight time under the supervision of an authorized flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.

(3) An applicant for a PPL with glider category shall have completed-

(a) not less than 6 hours of flight time as pilot of gliders including 2 hours solo flight time during which not less than 20 launches and landings have been performed; and

(b) if the applicant has logged 40 hours of flight time in aeroplanes the applicant shall complete 3 hours of flight time in a glider, including 2 hours of solo flight time during which not less than 10 launches and landings have been performed.

(4) An applicant for a PPL with a balloon class rating shall have completed 16 hours which consists of not less than 8 training flights in the areas of operation that includes-

(a) where the training is being performed in a gas balloon-

(i) 2 flights of 2 hours each that consists of one training flight within 60 days prior to application for the rating on the areas of operation for a gas balloon;

(ii) 5 hours of solo flight in a gas balloon under an authorised instructor; and

(iii) one flight involving a controlled ascent to three thousand feet above the launch site;

(b) where the training is being performed in a balloon with an airborne heater-

(i) 2 flights of one hour each within 60 days prior to application for the rating on areas of operation appropriate to a balloon with an airborne heater;

(ii) 5 hours solo flight in a balloon with an airborne heater under an authorised instructor; and

(iii) one flight involving a controlled ascent to 3000 feet above the launch site.

(5) An applicant for a PPL with an airship class rating shall have completed 25 hours of flight training in airships on the areas of operation which consists of at least-

(a) if the privileges of the licence are to be exercised at night, three hours of night flight training in an airship that includes-

- (i) a cross-country flight of over 25 nautical miles total distance; and
- (ii) 5 takeoffs and 5 landings to a full stop, with each landing involving a flight in the traffic pattern, at an airport; and

(b) 5 hours of solo flight in an airship with an authorised instructor.

(6) Except for balloons and gliders, an applicant for PPL who has flight time as a pilot in other categories may be credited with 10 hours of the total flight time.

Privileges and limitations

39. (1) Except as provided in sub-regulations (2) to (7), a holder of a private pilot licence (PPL) shall not act as a crew member of an aircraft-

- (a) carrying passengers or property for compensation or hire; or
- (b) operated for compensation or hire.

(2) A holder of a PPL may exercise the privileges of a holder of a flight radiotelephone operator licence as prescribed in regulation 122.

(3) A holder of a PPL may, for compensation or hire, act as a crew member of an aircraft in connection with any business or employment if-

- (a) the flight is only incidental to that business or employment; and
- (b) the aircraft does not carry passengers or property for compensation or hire.

(4) A holder of a PPL may act as a crew member of an aircraft used in a passenger-carrying flight sponsored by a charitable organisation described in paragraph (g), and for which the passengers make a donation to the organisation, when the following requirements are met-

- (a) the sponsor of the flight notifies the Authority at least 7 days before the event and submits-
 - (i) a signed letter from the sponsor that shows the name of the sponsor, the purpose of the charitable event, the date and time of the event, and the location of the event; and
 - (ii) a photocopy of each crew member's pilot licence, medical certificate and logbook entries that show the pilot has a valid licence and has logged at least 200 hours of flight time;
- (b) the flight is conducted from a public airport that is adequate for the aircraft to be used or from another airport that has been approved by the Authority for the operation;
- (c) no acrobatic or formation flights are conducted;
- (d) each aircraft used for the charitable event holds a valid certificate of airworthiness;
- (e) each aircraft used for the charitable event is airworthy and complies with the applicable requirements of the Civil Aviation Authority (Operation of Aircraft) Regulations;

- (f) each flight for the charitable event is made during the day and observes visual flight rules conditions; and
- (g) the charitable organisation is an organisation identified as such by the appropriate authority of the Government.

(5) A holder of a PPL may be reimbursed for aircraft operating expenses that are directly related to search and rescue operations, if the expenses involve only fuel, oil, airport expenditures, or rental fees, and the operation is sanctioned and under the direction and control of-

- (a) a Government agency; or
- (b) an organisation that conducts search and rescue operations.

(6) A holder of a PPL who is an aircraft salesman and who has logged at least 200 hours of logged flight time may demonstrate an aircraft in flight to a prospective buyer.

(7) A holder of a PPL shall not pay less than the pro rata share of the operating expenses of a flight with passengers, if the expenses involve only fuel, oil, airport expenditures or rental fees.

(8) Except as provided in sub-regulations (2) to (7), a holder of a PPL shall, not for compensation or hire, act as a co-pilot of an aircraft that is type certified for more than one pilot.

Renewal requirements

40. A PPL may be renewed if the holder of the licence has logged the following hours as PIC on category, class or type rating sought within the 12 months preceding the date of application for renewal-

- (a) for aeroplane and rotorcraft not less than 5 hours; and
- (b) for glider or lighter than air aircraft, not less than 3 hours.

COMMERCIAL PILOT LICENCE

Eligibility requirements

41. (1) An applicant for a commercial pilot licence (CPL) shall-

- (a) be at least eighteen years of age;
- (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule;
- (c) receive a logbook endorsement from an authorised instructor who-
 - (i) conducted the required ground training on the aeronautical knowledge areas listed in regulation 42 that apply to the aircraft category and class rating sought; and
 - (ii) certified that the person is prepared for the required knowledge test that applies to the aircraft category and class rating sought.

- (d) pass the required knowledge test on the aeronautical knowledge areas listed in regulation 42;
- (e) receive the required training and a logbook endorsement from an authorised instructor who-
 - (i) conducted the training on the areas of operation listed in regulation 43 that apply to the aircraft category and class rating sought; and
 - (ii) certified that the person is prepared for the required practical test;
- (f) be in possession of a class I medical certificate issued under these Regulations;
- (g) meet the aeronautical experience requirements of the applicable provisions of these Regulations that apply to the aircraft category and class rating sought before applying for the practical test;
- (h) pass the required practical test on the areas of operation listed in regulation 43 that apply to the aircraft category and class rating sought;
- (i) hold a PPL issued under these Regulations or meet the requirements of regulation 14, pertaining to military licences; and
- (j) comply with all sections of these Regulations which apply to the aircraft category and class rating sought.

Aeronautical knowledge requirements

42. (1) Subject to sub-regulation (2) an applicant for a commercial pilot licence (CPL), shall receive and record ground training in a manner prescribed by the Authority, from an authorised instructor on the aeronautical knowledge areas that apply to the aircraft category and class rating sought.

(2) The aeronautical knowledge areas applicable to any relevant aircraft category and class rating shall be as follows-

- (a) air law-rules and regulations relevant to the holder of a CPL, rules of the air, appropriate air traffic services practices and procedures;
- (b) aircraft general knowledge-
 - (i) principles of operation and functioning of aircraft powerplants, systems and instruments;
 - (ii) operating limitations of appropriate aircraft category and powerplants, relevant operational information from the flight manual or other appropriate document;
 - (iii) use and serviceability checks of equipment and systems of appropriate aircraft category;
 - (iv) maintenance procedures for airframes, systems and powerplants of appropriate aircraft category;
- (c) flight performance and planning-

- (i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations;
 - (ii) use and practical application of take-off, landing and other performance data;
 - (iii) pre-flight and en-route flight planning appropriate to operations under visual flight rules (VFR);
 - (iv) preparation and filing of air traffic services flight plans and appropriate air traffic services procedures;
- (d) human performance-human performance relevant to the CPL;
- (e) meteorology-
- (i) interpretation and application of aeronautical meteorological reports, charts and forecasts; use of and procedures for obtaining, meteorological information, pre-flight and in-flight and altimetry;
 - (ii) aeronautical meteorology, climatology of relevant areas in respect of the elements having an effect upon aviation, the moment of pressure systems, the structure of fronts and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions and hazardous weather avoidance;
- (f) navigation-air navigation, including the use of aeronautical charts, instruments and navigation aids, understanding of the principles and characteristics of appropriate navigation systems and operation of air borne equipment;
- (g) operation procedures-
- (i) use of aeronautical documentation such as Aeronautical Information Publication (AIP), NOTAM, aeronautical codes and abbreviations;
 - (ii) appropriate precautionary and emergency procedures;
 - (iii) operational procedures for carriage of freight, potential hazards associated with dangerous goods;
 - (iv) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft; and
 - (v) night and high altitude;
- (h) principles of flight-principles of flight relating to aircraft;
- (i) radiotelephony-radiotelephony procedures and phraseology as applied to VFR operations, action to be taken in case of communication failure.
- (3) The aeronautical knowledge areas applicable to any relevant rotorcraft category and class rating shall include all areas covered in sub-regulation (2) in addition to the following areas:

- (i) powerplants; transmissions (power trains);
- (ii) external loads on helicopter handling;
- (iii) settling with power, ground resonance, roll-over and other operating hazards; and
- (iv) operational procedures for carriage of freight including external loads.

(4) The aeronautical knowledge areas applicable to any relevant lighter than air category and class rating shall be as follows-

- (a) air law rules and regulations relevant to the holder of a free balloon pilot licence; rules of the air; appropriate air traffic services practices and procedures;
- (b) aircraft general knowledge-
 - (i) principles of operation of free balloon systems and instruments;
 - (ii) operating limitations of free balloons, relevant operational information from the flight manual or other appropriate document;
 - (iii) physical properties and practical application of gases used in free balloons;
- (c) flight performance and planning-
 - (i) effects of loading on flight characteristics; mass calculations;
 - (ii) use and practical application of launching, landing and other performance data, including the effect of temperature;
 - (iii) pre-flight and en-route flight planning appropriate to operations under VFR; appropriate air traffic services procedures and altimeter setting procedures; operations in areas of high-density traffic;
- (d) human performance-human performance relevant to the free balloon pilot;
- (e) meteorology-application of elementary aeronautical meteorology; use of, and procedures for obtaining meteorological information; altimetry;
- (f) navigation-practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;
- (g) operational procedures-
 - (i) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
 - (ii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;
- (h) principles of flight; and
- (i) principles of flight relating to free balloons.

Flight instruction requirements

43. An applicant for a commercial pilot licence (CPL), shall receive and record ground and flight training from an authorised instructor on the following areas of operation of this regulation that apply to the aircraft category and class rating sought-

- (a) for all categories and class ratings, as applicable-
 - (i) pre-flight operations, including mass and balance determination, aircraft inspection and servicing;
 - (ii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (iii) control of the aircraft by external visual reference;
 - (iv) flight at critically slow airspeeds; spin avoidance; recognition of and recovery from, incipient and full stalls;
 - (v) flight at critically high airspeeds; recognition of and recovery from, spiral dives;
 - (vi) normal and cross-wind take-offs and landings;
 - (vii) maximum performance (short field and obstacle clearance) take-offs; short-field landings;
 - (viii) basic flight manoeuvres and recovery from unusual altitudes by reference solely to basic flight instruments;
 - (ix) cross-country flying using visual reference, dead reckoning and radio navigation aids; diversion procedures;
 - (x) abnormal and emergency procedures and manoeuvres; and
 - (xi) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology;
- (b) in addition to the areas of operation specified in paragraph (a), the applicable areas of operation for a multiengine class rating as follows-
 - (i) emergency operations; including the applicant's knowledge and performance of the following tasks-
 - (aa) emergency descent;
 - (bb) engine failure during take-off before vmc (simulated);
 - (cc) engine failure after lift-off (simulated);
 - (dd) approach and landing with one inoperative engine (simulated);
 - (ee) systems and equipment malfunctions; and
 - (ff) emergency equipment and survival gear;

- (a) air law-rules and regulations relevant to the holder of an airline transport pilot licence - aircraft; rules of the air; appropriate air traffic services practices and procedures;
- (b) aircraft general knowledge-
 - (i) general characteristics and limitations of electrical, hydraulic, pressurisation and other aircraft systems; flight control systems, including autopilot and stability augmentation;
 - (ii) principles of operation, handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance; relevant operational information from the flight manual or other appropriate document;
 - (iii) operating procedures and limitations of appropriate aircraft; effects of atmospheric conditions on aircraft performance;
 - (iv) use and serviceability checks of equipment and systems of appropriate aircraft;
 - (v) flight instruments; compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;
 - (vi) maintenance procedures for airframes, systems and powerplants of appropriate aircraft;
- (c) flight performance and planning-
 - (i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;
 - (ii) use and practical application of take-off, landing and other performance data, including procedures for cruise control;
 - (iii) pre-flight and en-route operational flight planning; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;
- (d) human performance- human performance relevant to the airline transport pilot - aircraft;
- (e) meteorology-
 - (i) interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
 - (ii) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;
 - (iii) causes, recognition and effects of engine and airframe icing; frontal zone penetration procedures; hazardous weather avoidance;

- (iv) practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts; jet streams;

(f) navigation-

- (i) air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems; specific navigation requirements for long-range flights;
- (ii) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft;
- (iii) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids;
- (iv) principles and characteristics of self-contained and external-referenced navigation systems; operation of airborne equipment;

(g) operational procedures-

- (i) interpretation and use of aeronautical documentation such as Aeronautical Information Publication (AIP), NOTAM, aeronautical codes and abbreviations and instrument procedure charts for departure, en-route, descent and approach;
- (ii) precautionary and emergency procedures; safety practices associated with flight under instrument flight rules (IFR);
- (iii) operational procedures for carriage of freight and dangerous goods;
- (iv) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft; and
- (v) night and high altitude;
- (h) principles of flight-principles of flight relating to aircraft; subsonic aerodynamics; compressibility effects, manoeuvre boundary limits, wing design characteristics, effects of supplementary lift and drag devices; relationships between lift, drag and thrust at various airspeeds and in different flight configurations;
- (i) radiotelephony-radiotelephony procedures and phraseology; action to be taken in case of communication failure.

(3) The aeronautical knowledge areas applicable to helicopter category rating shall include all areas covered under sub-regulation (2) and in addition, the following areas-

(a) helicopter general knowledge-

- (i) general characteristics and limitations of electrical, hydraulic, and other helicopter systems; flight control systems, including autopilot and stability augmentation;
- (ii) principles of operation, handling procedures and operating limitations of helicopter powerplants; transmission (power-trains); effects of atmospheric conditions on engine performance; relevant operational information from the flight manual;

(iii) operating procedures and limitations of appropriate helicopters; effects of atmospheric conditions on helicopter performance; relevant operational information from the flight manual;

(b) flight performance and planning-

- (i) effects of loading and mass distribution, including external loads, on helicopter handling, flight characteristics and performance; mass and balance calculations;
- (ii) causes, recognition and effects of engine, airframe and rotor icing; hazardous weather avoidance;

(c) navigation-use, accuracy and reliability of navigation systems; identification of radio navigation aids;

(d) operational procedures-

- (i) interpretation and use of aeronautical documentation such as Aeronautical Information Publication, NOTAM, aeronautical codes and abbreviations;
- (ii) precautionary and emergency procedures; settling with power, ground resonance, retreating blade stall, dynamic roll-over and other operating hazards; safety practices associated with flight under visual flight rules;
- (iii) operational procedures for carriage of freight, including external loads, and dangerous goods;
- (iv) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from helicopters;

(e) principles of flight-principles of flight relating to helicopters;

(f) radiotelephony-radiotelephony procedures and phraseology as applied to visual flight rules operations; action to be taken in case of communication failure.

Flight instruction requirements

49. An applicant for airline transport pilot licence (ATPL), aeroplanes or helicopters shall have received the flight instruction required for the issue of commercial pilot licence as prescribed in regulation 43; and-

- (a) for ATPL aeroplanes, shall receive the flight instructions required for the issue of the instrument rating prescribed in regulation 65; or
- (b) for ATPL helicopters if the privileges of instrument rating are to be exercised shall receive the flight instructions required for the issue of the instrument rating prescribed in regulation 65.

Aeronautical experience requirements

50. (1) An applicant for an airline transport pilot licence (ATPL), shall have completed for aeroplanes not less than 1500 hours of flight time or in the case of a helicopter not less than 1000 hours of flight time of which a maximum of 100 hours may be obtained in a synthetic flight trainer; out of the 100 hours, not more than 25 hours shall have been acquired in a flight procedure trainer or a basic instrument flight trainer.

(2) The applicant shall have completed in aeroplanes not less than-

- (a) 250 hours, either as PIC or made up by not less than 100 hours as PIC and the necessary additional flight time as co-pilot performing, under the supervision of the PIC, the duties and functions of a PIC; provided that the method of supervision employed is acceptable to the Authority;
- (b) 200 hours of cross-country flight time, of which not less than 100 hours shall be as PIC or as co-pilot performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;
- (c) for aeroplanes 75, hours of instrument time, of which not more than 30 hours may be obtained in the synthetic flight trainer and for helicopter 30 hours of instrument time, of which not more than 10 hours may be obtained in the synthetic flight trainer; and
- (d) for aeroplanes, 10 hours and for helicopters 50 hours of night flight as PIC or as co-pilot.

(3) When the applicant for ATPL aeroplanes or rotorcraft has flight time as a pilot of either category, the applicant shall be credited with 50% of the flight time as PIC towards the flight time of the category sought as required in sub-regulation (1).

Additional aircraft category, class and type ratings

51. An applicant who holds a valid airline transport pilot licence (ATPL) and seeks additional aircraft category, class and type rating shall-

- (a) meet the applicable eligibility requirements;
- (b) pass a knowledge test on the applicable aeronautical knowledge areas;
- (c) meet the applicable aeronautical experience requirements; and
- (d) pass the practical test on the areas of operation.

Privileges and limitations

51. (1) A holder of an airline transport pilot licence (ATPL) may-

- (a) exercise all the privileges of a holder of a private pilot licence and commercial pilot licence and instrument rating for aeroplane as stipulated in regulations 39, 45 and 67;
- (b) act as pilot-in-command and co-pilot in commercial air transport; and
- (c) exercise all the privileges of the holder of a flight radiotelephone operator licence as stipulated in regulation 122.

(2) A holder of an ATPL may be authorised to act as a flight instructor, not being a holder of a flight instructor rating, when instructing pilots within an air operator certificate holders approved training programme in aircraft of the category, class, and type, as applicable, for which the airline transport pilot is rated, and in synthetic flight trainers of those aircraft, and endorse the logbook or other training record of the person to whom training has been given.

(3) A holder of an ATPL shall not instruct in an aircraft or in an approved synthetic flight trainer except for the briefing and debriefing sessions-

- (a) for more than eight hours in any twenty four-consecutive-hour period; or
- (b) for more than thirty six hours in any seven-consecutive-day period.

(4) A holder of an ATPL shall not instruct in category II or category III operations unless the holder has been trained and successfully tested under category II or category III operations, as applicable.

Renewal requirements

53. A holder of an airline transport pilot licence may apply for renewal of the licence if the holder of the licence has logged not less than six hours as pilot in command or co-pilot and has done six take-offs and landings within the six months preceding the date of application for renewal.

PART VII PILOT RATINGS AND AUTHORISATIONS

Category rating

54. A pilot seeking a category rating shall-

- (a) have received the required training and possess the aeronautical experience prescribed by these Regulations for the aircraft category and, if applicable, class and type rating sought;
- (b) have an endorsement in the logbook of that pilot or training record from an authorised instructor that the applicant has been found competent in the following areas, as appropriate to the pilot licence for the aircraft category and, if applicable, class and type rating sought-
 - (i) aeronautical knowledge areas; and
 - (ii) areas of operation; and
- (c) pass the knowledge and practical test that is appropriate to the pilot licence for the aircraft category and, if applicable, the class rating sought.

Class ratings

55. A pilot seeking an additional class rating-

- (a) shall have an endorsement in the logbook of that pilot or training record from an authorised instructor that the applicant has been found competent in the following areas, as appropriate to the pilot licence and for the aircraft class rating sought-
 - (i) aeronautical knowledge area; and
 - (ii) areas of operation.
- (b) shall pass the practical test applicable to the pilot licence for the aircraft class rating sought;

- (c) need not meet the training time requirements prescribed under these Regulations for the aircraft class rating sought; and
- (d) need not take an additional knowledge test, if the applicant holds an aeroplane, rotorcraft or airship category at that pilot licence level.

Type ratings

56. (1) To act as a pilot in command of-

- (a) an aircraft certificated for at least two pilots;
- (b) any aircraft considered necessary by the Authority; or
- (c) each type of helicopter,

a pilot shall hold a type rating for that aircraft.

(2) No person shall act as a commercial pilot in an aero-plane of which the maximum certificated take-off mass is over 2,300 kg unless the licence of that person includes an instrument rating.

(3) A pilot seeking an aircraft type rating to be added on a pilot licence, or the addition of an aircraft type rating that is accomplished concurrently with an additional aircraft category or class rating shall-

- (a) have an endorsement in the logbook or training record from an authorised instructor that the applicant has been found competent in the areas of operation appropriate to the pilot licence for the aircraft category, class and type rating sought and the applicant has logged-
 - (i) for aeroplanes of maximum certificated take-off mass of 5,700 kg or below, not less than 5 hours of flight time under the supervision of an authorised flight instructor in the aircraft type sought; and
 - (ii) for aeroplanes of maximum certificated take-off mass of over 5,700 kg where training is conducted in a synthetic flight trainer, not less than 30 hours of synthetic flight trainer time and 3 hours of actual flying time in the aircraft type sought;
- (b) pass the flight check-out for the aircraft type rating sought; and
- (c) pass a knowledge test on the aircraft type on which the rating is sought.

Category II and III operations pilot authorisation requirements

57. (1) An applicant for a category II or category III operations pilot authorisation shall-

- (a) hold a pilot licence with an instrument rating or an airline transport pilot licence;
- (b) hold a category and class rating, and type rating, for the aircraft for which the authorisation is sought; and
- (c) complete the practical test requirements.

(2) An applicant for a category II or category III operations pilot authorisation shall have at least-

- (a) 50 hours of night flight time as PIC;
- (b) 75 hours of instrument time under actual or simulated instrument conditions that may include not more than-
 - (i) a combination of 25 hours of simulated instrument flight time in an approved synthetic flight trainer; or
 - (ii) 40 hours of simulated instrument flight time if accomplished in an approved course conducted by an appropriately rated approved training organisation certified under the Civil Aviation (Approved Training Organisations) Regulations; and
- (c) 250 hours of cross-country flight time as PIC.

(3) Upon passing a practical test for a category II or III operations pilot authorisation, a pilot may renew the authorisation for each type of aircraft for which the pilot holds the authorisation.

(4) The Authority may not renew a category II or category III operations pilot authorisation for a specific type aircraft for which an authorisation is held beyond 12 months from the date the applicant passed a practical test in that type of aircraft.

(5) Where the holder of a category II or category III operations pilot authorisation passes the practical test for a renewal in the month before the authorisation expires, the Authority will consider that the holder passed it on the date the authorisation expired.

(6) The Authority may issue a category II or category III pilot authorisation by way of a letter, as a part of an applicant's instrument rating or pilot licence.

(7) Upon original issue the authorisation shall contain the following limitations-

- (a) for category II operations, 500 metres runway visual range (RVR) and a 150 feet decision height (DH); and
- (b) for category III operations, as specified in the authorisation document.

(8) To remove the limitations on a category II or category III pilot authorization-

- (a) a category II operations limitation holder may remove the limitation by showing that, since the beginning of the sixth preceding month, the holder has made three category II operations instrument landing system (ILS) approaches with a one hundred and fifty foot-decision height to a landing under actual or simulated instrument conditions; or
- (b) a category III operations limitation holder may remove the limitation by showing experience as specified in the authorisation.

(9) An authorisation holder or an applicant for an authorisation may use a synthetic flight trainer if that synthetic flight trainer is approved by the Authority for such use, to meet the experience requirement of sub-regulation (11) or for the practical test required by these Regulations for a category II or a category III operations pilot authorisation, as applicable.

(10) An applicant for the-

- (a) issue or renewal of a category II operations pilot authorisation; and
- (b) the addition of another type of aircraft to a category II operations pilot authorization, shall pass a practical test.

(11) To be eligible for the practical test for an authorisation under this regulation, an applicant shall-

- (a) meet the requirements of this regulation; and
- (b) if the applicant has not passed a practical test for this authorisation within the twelve months preceding the date of the test
 - (i) meet the requirements of the Civil Aviation (Operation of Aircraft) Regulations; and
 - (ii) have performed at least six instrument landing system (ILS) approaches within the six calendar months preceding the date of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(12) An applicant shall accomplish the approaches specified in sub-regulation (11) (b) (ii)-

- (a) under actual or simulated instrument flight conditions;
- (b) to the minimum decision height for the instrument landing system approach in the type aircraft in which the practical test is to be conducted, except that the approaches need not be conducted to the decision height authorised for category II operations;
- (c) to the decision height authorised for category II operations only if conducted in an approved synthetic flight trainer qualified for category II operations; and
- (d) in an aircraft of the same category and class and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved synthetic flight trainer that-
 - (i) represents an aircraft of the same category and class and type, as applicable, as the aircraft in which the authorisation is sought; and
 - (ii) is used in accordance with an approved course conducted by an approved training organisation certified under the Civil Aviation (Approved Training Organisations) Regulations.

(13) The flight time acquired in meeting the requirements of sub-regulation (11) (b) (ii) may be used to meet the requirements of sub-regulation (11) (b) (i).

(14) A category II operations practical test consists of an oral and flight increment.

(15) In case of an oral increment test the applicant shall demonstrate knowledge of the following-

- (a) required landing distance;

- (b) recognition of the decision height;
- (c) missed approach procedures and techniques using computed or fixed altitude guidance displays;
- (d) use and limitations of runway visual range (RVR);
- (e) use of visual clues, their availability or limitations and altitude at which they are normally discernible at reduced runway visual range;
- (f) procedures and techniques related to transition from non-visual to visual flight during a final approach under reduced runway visual range;
- (g) effects of vertical and horizontal wind shear;
- (h) characteristics and limitations of the instrument landing system and runway lighting system;
- (i) characteristics and limitations of the flight director system, auto approach coupler, including split axis type if equipped, auto throttle system if equipped) and other required category II operations equipment;
- (j) assigned duties of the co-pilot during category II approaches, unless the aircraft for which authorisation is sought does not require a co-pilot; and
- (k) instrument and equipment failure warning systems.

(16) In the case of a flight increment test it shall be conducted in an aircraft of the same category, class, and type, as applicable, as the aircraft in which the authorisation is sought or in an approved synthetic flight trainer that-

- (a) represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and
- (b) is used in accordance with an approved course conducted by an approved training organisation certificated under the Civil Aviation (Approved Training Organisations) Regulations.

(17) A flight increment shall consist of at least two instrument landing system approaches to 100 feet above including at least one landing and one missed approach.

(18) An approach performed during the flight increment shall be made with the use of an approved flight control guidance system, except if an approved auto approach coupler is installed, at least one approach shall be hand flown using flight director commands.

(19) If a multiengine aeroplane with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the flight increment shall include the performance of one missed approach with an engine, which shall be the most critical engine, if applicable, set at idle or zero thrust before reaching the middle marker.

(20) If an approved multi-engine synthetic flight trainer is used for the practical test, the applicant shall execute a missed approach with the most critical engine, if applicable.

(21) For an authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in coordination with a co-pilot who holds a type rating in the aircraft in which the authorisation is sought.

(22) The Authority's inspector or evaluator may conduct oral questioning at any time during a practical test.

(23) The Authority shall require that an applicant pass a practical test for-

- (a) issue or renewal of a category III operations pilot authorisation; or
- (b) the addition of another type of aircraft to a category III operations pilot authorisation.

(24) To be eligible for the practical test an applicant shall-

- (a) meet the requirements of this regulation; and
- (b) if the applicant has not passed a practical test for this authorisation during the twelve calendar months preceding the month of the test, the applicant shall-
 - (i) meet the requirements of the Civil Aviation (Operation of Aircraft) Regulations; and
 - (ii) have performed at least six instrument landing system approaches during the six calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(25) An applicant shall conduct the approaches specified in sub-regulation (24) (b) (ii)-

- (a) under actual or simulated instrument flight conditions;
- (b) to the alert height or decision height for the ILS approach in the type of aircraft in which the practical test is to be conducted;
- (c) not necessarily to the decision height authorised for category III operations;
- (d) to the alert height or decision height, as applicable, authorised for category III operations only if conducted in an approved synthetic flight trainer; and
- (e) in an aircraft of the same category and class, and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved synthetic flight trainer that-
 - (i) represents an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought; and
 - (ii) is used in accordance with an approved course conducted by an approved training organisation certificated under the Civil Aviation (Approved Training Organisations) Regulations.

(26) An applicant for a category III operations pilot authorisation shall demonstrate knowledge of the following-

- (a) required landing distance;
- (b) determination and recognition of the alert height or decision height, as applicable, including use of a radio altimeter;

- (c) recognition of and proper reaction to significant failures encountered prior to and after reaching the alert height or decision height, as applicable;
- (d) missed approach procedures and techniques using computed or fixed altitude guidance displays and expected height loss as they relate to manual go-around or automatic go-around, and initiation altitude, as applicable;
- (e) use and limitations of runway visual range (RVR), including determination of controlling RVR and required transmissometers;
- (f) use, availability, or limitations of visual cues and the altitude at which they are normally discernible at reduced RVR readings including-
 - (i) unexpected deterioration of conditions to less than minimum RVR during approach, flare, and rollout;
 - (ii) demonstration of expected visual references with weather at minimum conditions;
 - (iii) the expected sequence of visual cues during an approach in which visibility is at or above landing minima; and
 - (iv) procedures and techniques for making a transition from instrument reference flight to visual flight during a final approach under reduced RVR;
- (g) effects of vertical and horizontal wind shear;
- (h) characteristics and limitations of the instrument landing system and runway lighting system;
- (i) characteristics and limitations of the flight director system auto approach coupler, including split axis type if equipped, auto throttle system, if equipped, and other category III operations equipment;
- (j) assigned duties of the co-pilot during category III operations, unless the aircraft for which authorisation is sought does not require a co-pilot;
- (k) recognition of the limits of acceptable aircraft position and flight path tracking during approach, flare, and if applicable, rollout; and
- (l) recognition of, and reaction to, airborne or ground system faults or abnormalities, particularly after passing alert height or decision height, as applicable.

(27) An applicant for category III operations pilot authorisation may conduct the practical test in an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought, or in an approved synthetic flight trainer that-

- (a) represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and
- (b) is used in accordance with an approved course conducted by an approved training organisation certificated under the Civil Aviation (Approved Training Organisations Regulations).

(28) A category III operations practical test shall consist of at least two ILS approaches to one hundred feet above ground level, including one landing and one missed approach initiated from a very low altitude that may result in a touchdown during the go-around manoeuvre.

(29) An applicant for category III operations pilot authorisation shall perform all approaches during the practical test with the approved automatic landing system or an equivalent landing system approved by the Authority.

(30) If a multiengine aircraft with the performance capability to execute a missed approach with one engine inoperative is used for category III operations pilot authorisation practical test, the practical test shall include the performance of one missed approach with the most critical engine, if applicable, set at an idle or zero thrust before reaching the middle or outer marker.

(31) If an approved multiengine synthetic flight trainer is used for the category III operations pilot authorisation practical test, the applicant shall execute a missed approach with an engine, which shall be the most critical engine, if applicable, failed.

(32) For a Category III operations pilot authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a co-pilot who holds a type rating in the aircraft in which the authorisation is sought.

(33) Subject to the limitations of this sub-regulation, for category IIIB operations predicated on the use of a fail passive rollout control system, the applicant shall execute at least one manual rollout using visual reference or a combination of visual and instrument references, and shall initiate the manoeuvre by a fail-passive disconnect of the rollout control system-

- (a) after main gear touchdown;
- (b) prior to nose gear touchdown;
- (c) in conditions representative of the most adverse lateral touchdown displacement allowing a safe landing on the runway; and
- (d) in weather conditions anticipated in category III B operations.

(34) A person authorised by the Authority may conduct an oral test at any time during the category III operations pilot authorisation practical test.

Balloon ratings

58. Where an applicant for a PPL or CPL balloon successfully takes a practical test in-

- (a) a balloon with an airborne heater, the Authority shall place upon the pilot licence a limitation restricting the exercise of the privileges of that licence to a balloon with an airborne heater; or
- (b) a gas balloon, the Authority shall place upon the pilot licence a limitation restricting the exercise of the privilege of that licence to a gas balloon.

NIGHT RATING

General eligibility requirements

59. A holder of a private pilot licence (PPL) shall not act as a pilot in command by night in an aircraft unless a night rating or an instrument rating is included in the licence.

Flight instruction requirements

60. An applicant for a night rating shall have received five hours dual instruction under a qualified instructor in night flying; five flights as pilot in command including five take offs and landings in an aircraft.

Privileges and limitations

61. A night rating shall entitle the holder of a private pilot licence (PPL) to act as a pilot in command of an aircraft at night but does not entitle the holder to pilot an aircraft under instrument flight rules (IFR) conditions.

Renewal requirements

62. An applicant for renewal of a night rating shall have within the immediately preceding six months carried out as pilot in command not less than five takeoffs and five landings at night.

INSTRUMENT RATING***General eligibility requirements***

63. (1) A holder of a pilot licence shall not act either as pilot in command or as co-pilot of an aircraft under instrument flight rules unless the holder has received an instrument rating appropriate to the aircraft category.

(2) An applicant for an instrument rating shall-

- (a) hold a private pilot licence or commercial pilot licence with an aircraft category and type rating for the instrument rating sought;
- (b) receive a logbook or training record endorsement from an authorised instructor certifying that the person is prepared to take the required practical test;
- (c) pass the required knowledge test on the aeronautical knowledge areas, unless the applicant already holds an instrument rating in another category; and
- (d) pass the required practical test on the areas of operation in-
 - (i) the aircraft category, and type appropriate to the rating sought; or
 - (ii) a synthetic flight trainer or a flight training device appropriate to the rating sought and approved for the specific manoeuvre or procedure performed;
 - (iii) be in possession of a valid class I medical certificate issued under these Regulations.

Aeronautical knowledge requirements

64. An applicant for an instrument rating (aeroplanes and helicopters) shall receive and record ground training from an authorised instructor on the following subjects-

- (a) air law-rules and regulations relevant to flight under instrument flight rules (IFR); related air traffic services practices and procedures;
- (b) aircraft general knowledge-

- (i) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft under IFR and in instrument meteorological conditions; use and limitations of autopilot;
- (ii) compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;
- (c) flight performance and planning-
 - (i) pre-flight preparations and checks appropriate to flight under IFR;
 - (ii) operational flight planning; preparation and filing of air traffic services flight plans under IFR; altimeter setting procedures;
- (d) human performance-human performance relevant to instrument flight in aircraft;
- (e) meteorology-
 - (i) application of aeronautical meteorology; interpretation and use of reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information; altimetry;
 - (ii) causes, recognition and effects of engine and airframe icing; frontal zone penetration procedures; hazardous weather avoidance;
- (f) navigation-
 - (i) practical air navigation using radio navigation aids;
 - (ii) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids;
- (g) operational procedures-
 - (i) interpretation and use of aeronautical documentation such as Aeronautical Information Publication (AIP), NOTAM, aeronautical codes and abbreviations, and instrument procedure charts for departure, en-route, descent and approach;
 - (ii) precautionary and emergency procedures; safety practices associated with flight under IFR;
- (h) radiotelephony-radiotelephony procedures and phraseology as applied to aircraft operations under IFR; action to be taken in case of communication failure.

Flight instruction requirements

65. (1) An applicant for an instrument rating shall have 20 hours or more of the instrument flight time required in regulation 66(2)(b) while receiving and logging dual instruction in aircraft from an authorized flight instructor in an aircraft or approved synthetic flight trainer, on the subjects listed in regulation 64.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the holder of an instrument rating-

- (a) pre-flight procedures, including the use of the flight manual or equivalent document; and appropriate air traffic services documents in the preparation of an instrument flight rules (IFR) flight plan;
- (b) pre-flight inspection, use of checklists, taxiing and pre-take-off checks;
- (c) procedures and manoeuvres for IFR operation under normal, abnormal and emergency conditions covering at least-
 - (i) transition to instrument flight on take-off;
 - (ii) standard instrument departures and arrivals;
 - (iii) en-route IFR procedures;
 - (iv) holding procedures;
 - (v) instrument approaches to specified minima;
 - (vi) missed approach procedures; and
 - (vii) landings from instrument approaches;
- (d) in-flight manoeuvres and particular flight characteristics; or
- (e) if appropriate, operation of multi-engine helicopter solely by reference to instruments with one engine inoperative or simulated inoperative.

Aeronautical experience and skill requirements

66. (1) An applicant for an instrument rating shall hold a private pilot licence (PPL) or a commercial pilot licence or airline transport pilot licence (ATPL).

(2) An applicant for instrument rating shall have completed not less than-

- (a) 50 hours of cross-country flight time as pilot-in-command of aircraft in categories acceptable to the Authority, of which not less than 10 hours shall be in an aeroplane or helicopter; and
- (b) 40 hours of instrument time on aeroplanes or helicopters of which not more than 20 hours or 30 hours where a synthetic flight trainer is used may be instrument ground time under the supervision of an authorized instructor.

(3) If the privileges of the instrument rating are to be exercised on a multi-engine aeroplane out of the 20 hours specified in regulation 65 (1) the applicant shall have received 15 hours of dual instruction in such an aeroplane from an authorised flight instructor.

(4) An applicant shall have demonstrated the ability to perform as pilot-in command of an aircraft, the procedures and manoeuvres described in regulation 65 with a degree of competency appropriate to the privileges granted to the holder of an instrument rating and to-

- (a) operate the aircraft within its limitations;
- (b) complete all manoeuvres with smoothness and accuracy;

- (c) exercise good judgement and airmanship;
- (d) apply aeronautical knowledge; and
- (e) maintain control of the aircraft at all times in a manner such that the successful outcome of the procedures or manoeuvre is never seriously in doubt.

(5) An applicant shall have demonstrated the ability to operate a multi-engine aeroplane solely by reference to instruments with one engine inoperative or simulated inoperative, if the privileges of the instrument rating are to be exercised on such aeroplane.

Privileges and limitations

67. (1) A holder of an instrument rating may act as pilot of an aeroplane flying in accordance with instrument flight rules.

(2) To exercise the privileges on a multi-engine aeroplane, the holder shall have complied with the requirements of regulation 66.

Renewal requirements

68. An applicant for renewal of instrument rating shall pass a flight test either on an aircraft or an approved synthetic flight trainer of an aircraft type rating included in the pilot licence.

FLIGHT INSTRUCTOR RATING

Eligibility requirements

69. (1) To be eligible for a flight instructor rating an applicant shall-

- (a) be at least eighteen years of age;
- (b) hold either a CPL or ATPL with-
 - (i) an aircraft category and class rating that is appropriate to the flight instructor rating sought; and
 - (ii) an instrument rating, if the person holds a CPL and applying for a flight instructor rating with-
 - (aa) an aeroplane category and multiengine class rating; and
 - (bb) an instrument rating;
- (c) have received a logbook endorsement from an authorised instructor on the fundamentals of instructing listed in regulation 70 appropriate to the required knowledge test;
- (d) have passed a knowledge test on the areas listed in regulation 70;
- (e) have received a logbook endorsement from an authorised instructor on the areas of operation listed in regulation 72, appropriate to the flight instructor rating sought;
- (f) have passed the required practical test on the areas of operations listed in regulation 72, that is appropriate to the flight instructor rating sought in-

- (i) an aircraft that is representative of the category and class of aircraft for the aircraft rating sought; or
 - (ii) an approved synthetic flight trainer that is representative of the category and class of aircraft for the rating sought and used in accordance with an approved course at an approved training organisation certificated under the Civil Aviation (Approved Training Organisations) Regulations;
- (g) have accomplished the following for a flight instructor rating with an aircraft rating-
- (i) receive a logbook endorsement from an authorised instructor indicating that the applicant is competent and possesses instructional proficiency in stall awareness, spin entry, spins and spin recovery procedures after receiving flight training in those training areas in an aircraft, as appropriate, that is certificated for spins; and
 - (ii) demonstrate instructional proficiency in stall awareness, spin entry, spins and spin recovery procedures;
- (h) have logged at least fifteen hours as PIC in the category and class of aircraft that is appropriate to the flight instructor rating sought; and
- (i) have complied with the appropriate sections that apply to the flight instructor rating sought.

(2) For the purpose of the requirement of sub regulation (1) (g) (ii), the Authority may accept the endorsement specified in paragraph (g) (i) as satisfactory evidence of instructional proficiency in stall awareness, spin entry, spins and spin recovery procedures for the practical test, if the practical test is not a retest as a result of the applicant failing the previous test for deficiencies in those knowledge or skill areas.

(3) If the retest referred in sub-regulation (2) is the result of deficiencies in the ability of an applicant to demonstrate the requisite knowledge or skill, the applicant shall demonstrate the knowledge and skill to an examiner in an aircraft, as appropriate, that is certificated for spins.

Aeronautical knowledge requirements

70. (1) The applicant shall have met the knowledge requirements for the issue of a commercial pilot licence as prescribed in regulation 42 as appropriate.

(2) In addition to the requirements of sub-regulation (1) the applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a flight instructor rating, in the following areas-

- (a) techniques of applied instruction;
- (b) assessment of student performance in subjects in which ground instruction is given;
- (c) the learning process;
- (d) elements of effective teaching;
- (e) student evaluation and testing, training philosophies;
- (f) training programme development;

- (g) lesson planning;
- (h) classroom instructional techniques;
- (i) use of training aids;
- (j) analysis and correction of student errors;
- (k) human performance relevant to flight instruction; and
- (l) hazards involved in simulating system failures and malfunctions in the air.

Aeronautical experience

71. (1) An applicant for a flight instructor rating shall have met the experience requirements for the issue of a commercial pilot licence as prescribed in regulation 44.

(2) An applicant for a flight instructor rating shall demonstrate, in the category of aircraft for which flight instructor privileges are sought, the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instruction as appropriate.

Instruction requirements

72. An applicant for a flight instructor rating shall, under the supervision of an authorised flight instructor have-

- (a) received instruction of not less than 20 hours in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
- (b) have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.

Trainee's records

73. A holder of a flight instructor rating shall-

- (a) sign the logbook or any other approved record keeping document of each person to whom that instructor has given flight training or ground training;
- (b) maintain a record in a logbook or a separate document that contains the following-
 - (i) the name of each person whose logbook that instructor has endorsed for solo flight privileges, and the date of the endorsement; and
 - (ii) the name of each person that instructor has endorsed for a knowledge test or practical test and a record of the kind of test, the date, and the results; and
- (c) retain the records required by this regulation for three years from the date of giving the flight training or ground training.

Additional category

74. An applicant for an additional category flight instructor rating shall meet the eligibility requirements listed in regulation 69 that apply to the flight instructor rating sought.

Privileges

75. (1) A flight instructor shall have the following privileges-

- (a) to supervise student pilots on solo flights;
- (b) to carry out flight and ground instructions for the issue or renewal of-
 - (i) a private pilot licence;
 - (ii) a commercial pilot licence;
 - (iii) an instrument rating; and
 - (iv) a flight instructor rating.

(2) To exercise the privileges in sub-regulation (1), a flight instructor shall-

- (a) hold a licence and rating for which instruction is to be given in the appropriate aircraft category;
- (b) hold a licence and rating necessary to act as the pilot-in-command of the aircraft on which the instruction is to be given; and
- (c) have the flight instructor privileges entered on the licence.

Limitation and qualifications

76. (1) A holder of a flight instructor rating shall observe the limitations and qualifications specified in this regulation.

(2) In any twenty four consecutive-hour period, a flight instructor may not conduct more than eight hours of flight training.

(3) A flight instructor shall not conduct flight training in any aircraft for which the flight instructor does not hold-

- (a) a valid pilot licence with the applicable category and class rating and flight instructor rating;
- (b) if appropriate, a type-rating;
- (c) for instrument flight training or for training for a type rating not limited to visual flight rules, an appropriate instrument rating on the pilot licence of the flight instructor and flight instructor rating.

(4) A flight instructor shall not endorse-

- (a) a logbook of a student pilot for solo flight privileges, unless the flight instructor has-

- (i) given the student the flight training required for solo flight privileges required under these Regulations;
 - (ii) determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the logbook of the student that the instructor considers necessary for the safety of the flight;
 - (iii) given the student pilot training in the make and model of aircraft or a similar make and model of aircraft in which the solo flight is to be flown; and
 - (iv) endorsed the logbook of the student pilot for the specific make and model aircraft to be flown;
- (b) a logbook of a student pilot for a solo cross-country flight, unless the flight instructor has determined that-
- (i) the flight preparation, planning, equipment, and proposed procedures of the student are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that the instructor considers necessary for the safety of the flight; and
 - (ii) the student has the appropriate solo cross-country endorsement for the make and model of aircraft to be flown;
- (c) a logbook of a pilot for a flight check-out, unless the instructor has conducted a review of the pilot in accordance with the requirements of regulation 23; and
- (d) a logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of Civil Aviation Authority (Operation of Aircraft) Regulations.

(5) A flight instructor shall not give training required for the issue of a licence or rating in a multiengine aeroplane or helicopter unless that flight instructor has at least five flight hours of PIC time in the specific make and model of multiengine aeroplane or helicopter, as appropriate.

(6) A flight instructor shall not provide instruction to a pilot to qualify for a flight instructor rating unless that flight instructor-

- (a) holds an appropriate valid flight instructor rating and has exercised the privileges of that rating within the last twenty four months;
- (b) has given two hundred hours of flight training as a flight instructor in the relevant aircraft category; and
- (c) in the case of glider rating, has given at least eighty hours of flight training as a flight instructor in gliders.

Renewal requirements

77. A flight instructor rating may be renewed if the applicant-

- (a) passes a practical test for-
 - (i) renewal of the flight instructor rating; or

(ii) an additional flight instructor privileges; or

(b) presents to the Authority-

- (i) a record of training students that shows that within twelve months preceding the date of application for renewal of the rating, the flight instructor has endorsed at least five students for a practical test for a licence or rating, and at least eighty percent of those students passed that test on the first attempt; or
- (ii) a record that shows that within the preceding twelve months, the flight instructor has performed as a flight instructor or company check pilot and has logged not less than 20 instructional hours;
- (iii) a certificate showing that the applicant has successfully completed an approved flight instructor refresher course consisting of ground training or flight training or both, within the ninety days preceding the date of the expiry of the flight instructor rating.

Renewal of an expired flight instructor rating

78. A holder of an expired flight instructor rating shall pass a practical test for a flight instructor in order to renew the expired flight instructor rating.
Flight Examiner Authorisation

Flight examiner requirements

79. (1) A flight examiner shall hold-

- (a) a licence and rating for which the flight examiner is authorized to conduct skill tests or proficiency checks; and
- (b) appropriate flight instructor ratings for skill tests.

(2) To qualify for an authorization as a flight examiner, a pilot shall have logged 1000 hours of flight time and 200 hours providing flight instruction.

(3) The ground, flight and synthetic flight training for a flight examiner shall include the subjects listed in regulation 70.

(4) To qualify for an authorization as a flight examiner, a pilot shall have conducted at least one skill test under the observation by the Authority, in the role of an examiner for which authorisation is sought, including briefing, conduct of the skill test, and assessment of the applicant to whom the skill test is given, debriefing and recording or documentation.

(5) Subject to compliance with the requirements specified in these Regulations, the privileges of authorisation as an examiner are to conduct skill tests and proficiency checks for a licence and ratings.

Flight examiner training requirements

80. (1) The ground training for examiners shall include-

- (a) examiner duties, functions and responsibilities;

- (b) applicable regulations and procedures;
 - (c) appropriate methods, procedures and techniques for conducting the required tests and checks;
 - (d) proper evaluation of student performance including the detection of-
 - (i) improper and insufficient training; and
 - (ii) personal characteristics of an applicant that could adversely affect safety;
 - (e) appropriate corrective action in the case of unsatisfactory tests and checks; and
 - (f) approved methods, procedures and limitations for performing the required normal, abnormal and emergency procedures in the aircraft.
- (2) The flight training shall include-
- (a) training and practice in conducting flight evaluation from the left and right pilot seats for pilot examiners in the required normal, abnormal and emergency procedures to ensure competence to conduct the flight tests and checks;
 - (b) the potential results of improper, untimely or non-execution of safety measures during an evaluation; and
 - (c) the safety measures to be taken from either pilot seat for pilot check examiners for emergency situations that are likely to develop during an evaluation.
- (3) The flight training for examiners in synthetic flight trainer shall include-
- (a) training and practice in conducting flight checks in the required normal, abnormal and emergency procedures to ensure competence to conduct the evaluations tests and checks required under these Regulations; and
 - (b) training in the operation of synthetic flight trainer to ensure competence to conduct the evaluations required under these Regulations.

PART VIII LICENCES FOR FLIGHT CREW MEMBERS OTHER THAN PILOTS

FLIGHT ENGINEER LICENCE

Licences and ratings required

81. No person shall act as a flight engineer of an aircraft registered in Swaziland unless that person holds a flight engineer licence with appropriate ratings.

General eligibility requirements

82. An applicant for a flight engineer licence shall-

- (a) be at least eighteen years of age;

- (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule;
- (d) comply with the requirements of these Regulations that apply to the rating sought; and
- (e) possess a valid class 1 medical certificate issued under these Regulations.

Additional aircraft ratings

83. An applicant for an additional aircraft class, category or type rating flight engineer licence shall-

- (a) pass the knowledge test and practical test that is appropriate to the class category or type of aircraft for which an additional rating is sought; and
- (b) satisfactorily complete an approved flight engineer training programme that is appropriate to the additional class rating sought.

Knowledge requirements

84. (1) An applicant for a flight engineer licence shall pass a knowledge test on the following subjects-

- (a) air law: rules and regulations relevant to the holder of a flight engineer licence, rules and regulations governing the operation of aircraft pertinent to the duties of a flight engineer;
- (b) aircraft general knowledge-
 - (i) basic principles of powerplants, gas turbines or piston engines, characteristics of fuels, fuel systems including fuel control, lubricants and lubrication systems, afterburners and injection systems, function and operation of engine ignition and starter systems;
 - (ii) principles of operation, handling procedures and operating limitations of aircraft power plants, effects of atmospheric conditions on engine performance;
 - (iii) airframes, flight controls, structures, wheel assemblies, brakes and anti-skid units, corrosion and fatigue life, identification of structural damage and defects;
 - (iv) ice and rain protection systems;
 - (v) pressurization and air-conditioning systems, oxygen systems;
 - (vi) hydraulic and pneumatic systems;
 - (vii) basic electrical theory, electric systems (alternate current and direct current), aircraft wiring systems, bonding and screening;
 - (viii) principles of operation of instruments, compasses, autopilots, radio communication equipment, radio and radar navigation aids, flight management systems, displays and avionics;

- (ix) limitations of appropriate aircraft;
- (x) fire protection, detection, suppression and extinguishing systems; and
- (xi) use and serviceability checks of equipment and systems of appropriate aircraft;
- (c) flight performance and planning-
 - (i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations; and
 - (ii) use and practical application of performance data including procedures for cruise control;
- (d) human performance-human performance relevant to the flight engineer;
- (e) operational procedures-
 - (i) principles of maintenance, procedures for the maintenance of airworthiness, defect reporting, pre-flight inspections, precautionary procedures for fuelling and use of external power, installed equipment and cabin systems;
 - (ii) normal, abnormal and emergency procedures; and
 - (iii) operational procedures for carriage of freight and dangerous goods;
- (f) principles of flight: fundamentals of aerodynamics; and
- (g) radiotelephony: radiotelephony procedures and phraseology.

(2) The validity of the knowledge test results for an applicant for a licence for a flight engineer shall be eighteen months after passing the examination.

Aeronautical experience requirements

85. (1) Except as otherwise specified in this regulation, an applicant for a flight engineer licence shall obtain and log the flight time used to satisfy the aeronautical experience requirements of sub-regulation (2) on an aeroplane on which a flight engineer is required by these Regulations.

(2) An applicant for a flight engineer licence with a type rating shall present, for the type rating sought, satisfactory evidence of one of the following, including the practical experience with the aircraft described in sub-regulation (1)-

- (a) at least three years of practical experience in aircraft maintenance and at least five hours of flight training in the duties of a flight engineer; or
- (b) graduation from at least a two and half-years specialized aeronautical training course in aircraft maintenance and at least six months of practical experience in maintaining aircraft and aircraft engines and at least five hours of flight training in the duties of a flight engineer; or
- (c) a degree in aeronautical or avionics engineering from a college, university or engineering school acceptable to the Authority, at least one year of practical experience in aircraft maintenance and at least five hours of flight training in the duties of a flight engineer; or

- (d) a degree in electrical or mechanical engineering from a college, university or engineering school acceptable to the Authority, at least one year of practical experience in aircraft maintenance and at least five hours of flight training in the duties of a flight engineer; or
- (e) at least a CPL with an instrument rating and at least five hours of flight training in the duties of a flight engineer; or
- (f) at least two hundred hours of flight time in a transport category aeroplane as PIC or a co-pilot performing the functions of a PIC under the supervision of a PIC; or
- (g) not less than one hundred hours of flight time as a flight engineer; or
- (h) within the 90 period before the application, successful completion of an approved flight engineer ground and flight course of instruction.

Skill requirements

86. An applicant for a flight engineer licence with a type rating shall-

- (a) pass a practical test on the duties of a flight engineer in the type of aircraft for which a rating is sought or an approved synthetic flight trainer replicating such an aircraft;
- (b) show satisfactory performance in pre-flight inspection, servicing, starting, pre-takeoff and post-landing procedures;
- (c) while in-flight, show satisfactory performance of the normal duties and procedures relating to the aeroplane, aeroplane engines, propellers, if appropriate, systems and appliances; and
- (d) while in-flight, in a synthetic flight trainer or in an approved training device, show satisfactory performance on emergency duties and procedures and recognise and take appropriate action for malfunctions of the aeroplane, engines, propellers, if appropriate, systems and appliances.

Privileges

87. (1) A holder of a flight engineer licence may-

- (a) act as flight engineer of any type of aircraft on which the holder is rated;
- (b) be authorized to act as a flight engineer instructor for issue or renewal of flight engineer licences or ratings; and
- (c) exercise all the privileges of the holder of a flight radiotelephone operator licence as stipulated in regulation 127.

Renewal requirements

88. A holder of a flight engineer licence may apply for renewal of the licence if the holder has logged not less than six hours as flight engineer within the six months preceding the date of application for renewal.

PART IX**LICENCES, CERTIFICATES, RATINGS AND AUTHORISATIONS
FOR PERSONNEL OTHER THAN FLIGHT CREW MEMBERS****AIR TRAFFIC CONTROLLER LICENCE*****Required licences and ratings or qualifications***

89. (1) No person shall act as an air traffic controller (ATC) unless that person holds an air traffic controller licence issued under these Regulations.

(2) A licence to act as an air traffic controller shall include-

- (a) one or more ratings as specified in regulation 9(4) specifying the type of air traffic control service which the holder of the licence is competent to provide; and
- (b) a list of the places at which, and the type of radar equipment, if any, with the aid of which the licence holder may provide the service.

(3) Where during a continuous period of six months the holder of an air traffic controller licence has not at any time provided at a particular place the type of air traffic control service specified in the rating, the rating shall cease to be valid for that place at the end of the six months period.

(4) Upon a rating ceasing to be valid as specified for a place in sub paragraph (3), the holder of the air traffic controller licence shall forthwith inform the Authority to that effect and shall forward the licence to the Authority to enable the licence to be endorsed accordingly.

General eligibility requirements

90. An applicant for an air traffic controller licence shall-

- (a) be at least 21 years of age;
- (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule without impediment of speech that would interfere with two way radio conversation; and
- (c) comply with the knowledge requirements of regulations 91 and 92.

Knowledge requirements for issue of an ATC licence

91. (1) An applicant for an air traffic controller licence shall have received and passed an approved training course in air traffic control conducted at an approved training organisation in at least the following subjects-

- (a) air law - rules and regulations relevant to the air traffic controller;
- (b) air traffic control equipment - principles, use and limitations of equipment used in air traffic control;
- (c) general knowledge - principles of flight; principles of operation and functioning of aircraft, powerplants and systems; aircraft performances relevant to air traffic control operations;

- (d) human performance- human performance relevant to air traffic control;
 - (e) language - the language or languages nationally designated for use in air traffic control and ability to speak such language or languages without accent or impediment which would adversely affect radio communication;
 - (f) meteorology - aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry;
 - (g) navigation - principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and
 - (h) operational procedures- air traffic control, communication, radiotelephony and phraseology procedures (routine, non routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.
- (2) The applicant shall have undergone the actual control of air traffic under the supervision of an appropriately rated air traffic controller and acquired experience for the rating sought as specified in regulation 92.
- (3) The applicant shall hold a current class 3 medical certificate.
- (4) The validity of the knowledge test results for an applicant for an air traffic controller licence shall be eighteen months after passing the test.

Knowledge requirements for air traffic controller ratings

92. (1) An applicant for air traffic controller rating shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following subjects in so far as they affect the area of responsibility-

- (a) aerodrome control rating-
 - (i) aerodrome layout, physical characteristics and visual aids;
 - (ii) airspace structure;
 - (iii) applicable rules, procedures and source of information;
 - (iv) air navigation facilities;
 - (v) air traffic control equipment and its use;
 - (vi) terrain and prominent landmarks;
 - (vii) characteristics of air traffic;
 - (viii) weather phenomena; and
 - (ix) emergency and search and rescue plans;
- (b) approach control and area control ratings-

- (i) airspace structure;
- (ii) applicable rules, procedures and source of information;
- (iii) air navigation facilities;
- (iv) air traffic control equipment and its use;
- (v) terrain and prominent landmarks;
- (vi) characteristics of air traffic and traffic flow;
- (vii) weather phenomena;
- (viii) emergency and search and rescue plans; and

(c) approach radar, approach precision radar and area radar control ratings.

(2) An applicant for air traffic control rating shall meet the requirements specified in sub-regulation (1) (b) in so far as they affect the area of responsibility, and shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following additional subjects-

- (a) principles, use and limitations of radar, other surveillance systems and associated equipment; and
- (b) procedures for the provision of approach, precision approach or area radar control services, as appropriate, including procedures to ensure appropriate terrain clearance.

(3) The validity of the knowledge test results for an applicant for a air traffic controller rating shall be twelve months after passing the test.

(4) An applicant for air traffic controller rating shall undergo the actual control of air traffic under the supervision of an appropriately rated air traffic controller and acquire experience for the rating sought as follows-

- (a) aerodrome control rating: an aerodrome control service, for a period of not less than 90 hours or one month, whichever is greater, at the unit for which the rating is sought;
- (b) approach control rating: an approach control service, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought;
- (c) approach radar control rating: an approach radar control service, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought;

(d) approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Authority, not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought;

(e) area control rating: an area control service, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought; and

(f) area radar control rating: an area radar control service, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought.

(5) The experience specified in sub-regulation (4) shall have been completed within the 6-month period immediately preceding application.

(6) Where the applicant already holds an air traffic controller rating in another category, or the same rating for another unit, the Authority shall determine whether the experience requirement can be reduced, and if so, to what extent.

(7) Where the privileges of the approach radar control rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator (PPI) approaches on the surveillance equipment of the type in use at the unit for which the rating is sought and under the supervision of an appropriately rated approach radar controller.

Skill requirements

93. (1) An applicant for air traffic controller rating shall have demonstrated, at a level appropriate to the privileges being granted, the skill, judgement and performance required to provide a safe, orderly and expeditious flow of air traffic.

(2) An applicant for a unit rating at an air traffic control unit shall be required to pass a practical test on each area listed in regulation 92 that is applicable to each operating position at the control unit at which the rating is sought.

Privileges and limitations

94. (1) Subject to sub-regulation (2) a holder of an air traffic controller licence which includes ratings of two or more of the classes specified in sub-regulation (2) shall not at any one time perform the function specified in respect of more than one of these ratings.

(2) The functions of any one of the following groups of ratings may be exercised at the same time-

(a) the aerodrome control rating and the approach control rating;

(b) approach control rating and the approach radar control rating; except that the functions of the approach radar control rating shall not be exercised at the same time as the functions of the approach radar control rating if the service being provided under the approach radar control is a surveillance radar approach terminating at a point less than two nautical miles from the point of intersection of the glide path with the runway, the two functions shall not be exercised at the same time;

(c) the area control rating and the area radar control rating; or

(d) by an aerodrome control tower or area control centre when it is necessary or desirable to combine under the responsibility of one unit of the functions of the approach control service with those of the aerodrome control service or area control service.

Privileges of ATC ratings

95. (1) The privileges of the holder of an air traffic controller licence endorsed with one or more of the under mentioned ratings shall be-

- (a) aerodrome control rating: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the licenceholder is rated;
- (b) approach control rating: to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion of the airspace, under the jurisdiction of the unit providing approach control service;
- (c) approach radar control rating: to provide or supervise the provision of approach control service with the use of radar or other surveillance systems for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or of the airspace, under the jurisdiction of the unit providing approach control service; and in-case the holder complies with the rating the privileges shall include the provision of surveillance radar approaches;
- (d) approach precision radar control rating: to provide or supervise the provision of precision approach radar service at the aerodrome for which the licence holder is rated;
- (e) area control rating: to provide or supervise the provision of area control service within the control area or portion of the control area, for which the licence holder is rated;
- (f) area radar control rating: to provide or supervise the provision of area control service with the use of radar, within the control area or portion of the control area, for which the licence holder is rated.

(2) Before exercising the privileges indicated in sub-regulation (1), the air traffic controller licence holder shall be familiar with all pertinent and current information and shall indicate by signing their name indicating the time in coordinated universal time (UTC) in the appropriate air traffic controller log book.

(3) The holder of an air traffic controller licence shall not provide instruction in an operational environment except as authorised in writing by the Authority.

Validity of ATC rating

96. An air traffic controller rating becomes invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period of six months and shall remain invalid until the ability of the controller to exercise the privileges of the rating has been re-established.

Maximum working hours

97. (1) Except in an emergency, a licensed air traffic controller shall not perform any duties for twenty-four consecutive hours during each seven consecutive days.

(2) An air traffic controller may not serve or be required to serve-

- (a) for more than ten consecutive hours; or

- (b) for more than ten hours during a period of twenty four consecutive hours, unless the air traffic controller has had a rest period of at least eight hours at or before the end of the ten hours of duty.

Responsibilities over fatigue

98. A person holding an air traffic controller licence shall not act as an air traffic controller nor shall an employer allow a licensed controller, if the controller or the employer knows or suspects that the controller is suffering from or having regard to the circumstances of the period of duty to be undertaken, is likely to suffer from, fatigue that may endanger the safety of any aircraft to which an air traffic control service may be provided.

Prohibition of unlicensed air traffic controllers

99. (1) An air traffic controller shall not provide any type of air traffic service at any aerodrome at which air traffic control service is required to be provided under the Civil Aviation Authority (Rules of the Air and Air Traffic Control) Regulations or at any other place, not being an aerodrome, at which air traffic control service is provided, whether or not under the direction of the Authority, unless the air traffic controller does so in accordance with the terms of-

- (a) a valid air traffic controller licence so granted authorizing the air traffic controller to provide that type of service at that aerodrome or other places;
- (b) a valid air traffic controller licence so granted which does not authorise the air traffic controller to provide that type of service at the aerodrome or other place, but the air traffic controller is supervised by a person who is present at the time and who is the holder of a valid air traffic controller licence so granted which authorizes the air traffic controller to provide at that aerodrome or other place the type of air traffic control service which is being provided; or
- (c) the appointment of the air traffic controller as an air traffic controller trainee who is supervised by a person who is present at the time and who is the holder of a valid licence of an air traffic controller which authorises the air traffic controller to provide that type of service at any aerodrome or at a place at which air traffic control service is provided.

(2) An air traffic controller licence shall not be required by any person who acts in the course of duty as a member of the Swaziland military or a visiting force.

(3) A holder of an air traffic controller licence shall not perform any of the functions specified in regulation 100 in respect of a rating at any of the places referred to in sub regulation (1) unless-

- (a) the licence includes that rating and the rating is valid for the place at which, and the type of radar equipment, if any, with the aid of which functions are performed; or
- (b) the holder is supervised by a person who is present at the time and who is the holder of a valid air traffic controller's licence granted under these Regulations which authorises him or her to provide at that aerodrome or other place the type of air traffic control service which is being provided.

(4) Nothing in this regulation shall prohibit a holder of a valid air traffic controller licence from providing at any place for which the licence includes a valid rating, information to aircraft in flight in the interests of safety.

Renewal requirements

100. An air traffic controller licence may be renewed if the holder demonstrates, at a level appropriate to the privileges being renewed, the skill, judgement and performance required to provide a safe, orderly and expeditious control service within the six months preceding the date of application for renewal.

GROUND INSTRUCTOR LICENCE***Eligibility requirements***

101. (1) An applicant for a ground instructor licence shall-

- (a) be at least eighteen years of age;
- (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule;
- (c) pass a knowledge test on the fundamentals of instructing including-
 - (i) the learning process;
 - (ii) elements of effective teaching;
 - (iii) student evaluation and testing;
 - (iv) course development;
 - (v) lesson planning;
 - (vi) classroom training techniques;
 - (vii) techniques of applied instructions;
 - (viii) use of training aids;
 - (ix) analysis and correction of student errors; and
 - (x) human performance relevant to ground instruction;
- (d) pass a knowledge test on the aeronautical knowledge areas specified in regulations 36, 42 and 48.

(2) A ground instructor licence shall be issued with either one of the following ratings-

- (a) basic;
- (b) advanced;
- (c) instrument.

(3) The knowledge test specified in sub-regulation (1) (c) is not required if the applicant holds a flight instructor rating issued under these Regulations.

(4) The knowledge test results for a ground instructor licence shall be valid for eighteen months after passing the examination.

Privileges

102. (1) A holder of a ground instructor licence may exercise the privileges appropriate to the rating as follows-

- (a) for a holder of a basic ground instructor rating-
 - (i) ground training in the aeronautical knowledge areas required for the issue of a private pilot licence (PPL) or associated ratings;
 - (ii) ground training required for a private pilot flight check-out; and
 - (iii) a recommendation for a knowledge test required for the issuance of a PPL;
- ✱ (b) for a holder of an advanced ground instructor rating-
 - (i) ground training in the aeronautical knowledge areas required for the issue of any pilot licence or rating;
 - (ii) ground training required for any flight check out; and
 - (iii) a recommendation for a knowledge test required for the issue of any licence;
- (c) for a holder of an instrument ground instructor rating-
 - (i) ground training in the aeronautical knowledge areas required for the issue of an instrument rating;
 - (ii) ground training required for an instrument proficiency check; and
 - (iii) a recommendation for a knowledge test required for the issue of an instrument rating.

(2) A person who holds a ground instructor licence shall be authorised, within the limitations of the ratings on the ground instructor licence, to endorse the logbook or other training record of a person to whom the holder has provided the training or recommendation specified in sub-regulation (1).

Requirements for ratings

✱ 103. An applicant for a ground instructor licence is required to hold or have held a commercial pilot licence (CPL) or airline transport pilot licence (ATPL) as appropriate or passes the following-

- ✱ (a) basic ground instructor rating: aeronautical knowledge requirements for CPL as prescribed in regulation 42;
- (b) advanced ground instructor rating: aeronautical knowledge requirements for ATPL as prescribed in regulation 48;
- (c) instrument ground instructor rating-

- (i) meet the requirements of paragraph (a) or (b) and in addition the instrument rating knowledge requirements as prescribed in regulation 64; and
- (ii) be a holder of a valid instrument rating.

Renewal requirements

104. A holder of a ground instructor licence shall not perform the duties of a ground instructor unless within the twelve preceding months the person has served for three months as a ground instructor.

FLIGHT OPERATIONS OFFICER LICENCE

General eligibility requirements

105. An applicant for a flight operations officer licence shall-

- (a) be at least 21 years of age;
- (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule; and
- (c) comply with the knowledge requirements, experience or training requirements and skill requirements for flight operations officer as contained in these Regulations.

Knowledge requirements

106. (1) An applicant for a flight operations officer licence shall pass a knowledge test covering the following areas-

- (a) air law- rules and regulations relevant to the holder of a flight operations officer licence and appropriate air traffic services practices and procedures;
- (b) aircraft general knowledge-
 - (i) principles of operation of aeroplane powerplants, systems and instruments;
 - (ii) operating limitations of aeroplanes and powerplants; and
 - (iii) minimum equipment list;
- (c) flight performance calculation and planning procedures-
 - (i) effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;
 - (ii) operational flight planning, fuel consumption and endurance calculations, alternate airport selection procedures, en-route cruise control and extended range operation;
 - (iii) preparation and filing of air traffic services flight plans; and
 - (iv) basic principles of planning systems; computer-assisted.

- (d) human performance- human performance relevant to dispatch duties;
- (e) meteorology-
 - (i) aeronautical meteorology, the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions; and
 - (ii) interpretation and application of aeronautical meteorological reports, charts and forecasts, codes and abbreviations, use of, and procedures for obtaining, meteorological information;
- (f) navigation- principles of air navigation with particular reference to instrument flight;
- (g) operational procedures-
 - (i) use of aeronautical documentation;
 - (ii) operational procedures for the carriage of freight and dangerous goods;
 - (iii) procedures relating to aircraft accidents and incidents and emergency flight procedures; and
 - (iv) procedures relating to unlawful interference and sabotage of aircraft;
- (h) principles of flight- principles of flight relating to the appropriate category of aircraft; and
- (i) radio communication- procedures for communicating with aircraft and relevant ground stations.

(2) The knowledge test results for a flight operations officer licence shall be valid for eighteen months after passing the examination.

Experience or training requirements

107. (1) An applicant for a flight operations officer licence shall present documentary evidence satisfactory to the Authority that the applicant has the experience or training as follows-

- (a) a total of two years' service in any one or in any combination of the capacities specified in sub-paragraph (i), (ii), (iii), provided that in any combination of experience the period served in any capacity shall be at least one year-
 - (i) a flight crew member in commercial air transport; or
 - (ii) a meteorologist in an organization dispatching aircraft in commercial air transport; or
 - (iii) an air traffic controller or technical supervisor of flight operations officer or air transportation flight operations systems; or
- (b) at least one year as an assistant in the dispatching of aircraft used in commercial air transport; or
- (c) has satisfactorily completed an approved course training in a flight operations.

(2) An applicant shall have served under the supervision of a flight operations officer for at least ninety days within the six months immediately preceding the application.

Skill requirements

108. An applicant for a flight operations officer licence shall demonstrate the ability to-
- (a) make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports;
 - (b) provide an operationally valid briefing on weather conditions prevailing in the general neighbourhood of a specific air route;
 - (c) forecast weather trends pertinent to air transportation with particular reference to destination and alternates;
 - (d) determine the optimum flight path for a given segment and create accurate manual or computer generated flight plans; and
 - (e) provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions, as appropriate to the duties of the holder of a flight operations officer licence.

Privileges

109. Subject to compliance with the requirements of these Regulations, the privileges of a holder of a flight operations officer licence shall be to serve in that capacity with responsibility for each area for which the applicant meets the requirements specified in the Civil Aviation Authority (Operation of Aircraft) Regulations.

Renewal requirements

110. A flight operations officer licence may be renewed if the holder has performed duties in the six months preceding the date of application for renewal exercising the privileges of the licence.

AIRCRAFT MAINTENANCE ENGINEER

General eligibility requirements

111. (1) An applicant for a grant of an aircraft maintenance engineer licence (AMEL) shall-
- (a) be at least 18 years of age;
 - (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule and interpret technical reports and maintenance publications and carry out technical discussions in the English language;
 - (c) comply with the knowledge, experience and competency requirements prescribed for the rating sought; and
 - (d) pass all of the prescribed examinations for the rating sought, within twelve months preceding the date of filing the application.
- (2) A licensed aircraft maintenance engineer (LAME) who applies for an additional rating shall meet the requirements of regulation 113.

Aeronautical knowledge and skill requirements

112. (1) An applicant for an aircraft maintenance licence for engineers shall demonstrate the level of knowledge and skill in the subjects as provided in the Second Schedule.

(2) The knowledge test results for a licence for an aircraft maintenance engineer shall be valid for twelve months after passing the examination.

Experience requirements: licence with or without type rating

113. (1) Except as specified in sub-regulation (2), an applicant for the issue or extension of a licence in categories A, C, X and R must show confirmed minimum specific periods of aircraft maintenance engineering experience totalling 3 years.

(2) An applicant for category 'X' - compass compensation and adjustment shall hold a licence without type ratings (LWTR) in both categories 'A' and 'C' or 'X' or 'R' and shall have a minimum of six months engineering experience relating to the maintenance of operating aircraft in the two years preceding the date of application, with a minimum of six compass swings.

(3) An applicant shall demonstrate the following minimum experience gained while maintaining operating aircraft and not in component workshops or on static or non-flying aircraft-

- (a) for a Category 'A' or 'C' LWTR, 24 months relating to airframe or engine maintenance, 12 months of which shall be in the two years immediately preceding the date of application; or
- (b) for any category 'R' or 'X' LWTR (excluding Category 'X' - compass compensation and adjustment), 24 months related to avionics systems, 12 months of which shall be in the two years immediately preceding the date of application; and
- (c) six months, within the twelve months referred to in (a) and (b), relevant to the specific LWTR for which application is being made.

(4) Where an applicant for category 'X' electrical holds a valid licence which includes both category 'A' and category 'C' LWTR sub divisions, the experience in sub-regulation (3) (b) need not be complied with and the applicant needs to show only the six months experience relevant to the LWTR required in sub-regulation 3 (c).

(5) For an applicant for a licence without a type rating (LWTR) in one category but holding a valid licence in another category, the experience requirement of sub-regulation (3) (a) and (3) (b) may be reduced dependent on the total practical experience accumulated while holding that licence and training attended and the applicant case shall demonstrate the experience requirements of sub-regulation 3(c) and any of the periods specified in sub regulation (3) may be concurrent.

(6) Subject to sub-regulation (7) extension of a licence to include a type rating-

- (a) shall not require a period of general experience additional to that required for the relevant LWTR, which shall be held before a type rating is granted; and
- (b) shall require satisfactory record of experience, gained within the three years before the application, appropriate to the type rating sought.

(7) An applicant for a type rating from a holder of a LWTR which was gained following successful completion of an approved initial course shall show confirmed evidence that the applicant has obtained at least 12 months' relevant aircraft engineering experience with an organisation engaged in the maintenance of operational aircraft in addition to that gained during the course.

Privileges and limitations

114. (1) Except as specified in sub-regulations (4) and (5), a holder of an aircraft maintenance engineer licence (AMEL) 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 the holder of an AMEL is rated, if the holder has-

- (a) satisfactorily performed the work at an earlier date;
- (b) demonstrated the ability to perform the work to the satisfaction of the Authority;
- (c) received training acceptable to the Authority on the tasks to be performed; or
- (d) performed the work while working under the direct supervision of a holder of an AMEL or an aviation repair specialist who is appropriately authorised and has previous experience in the specific operation concerned or received training acceptable to the Authority on the task to be performed.

(2) Except as specified in sub-regulations (4) and (5), a holder of an MEL with an airframe rating may, after performing the inspection required by the Civil Aviation (Operation of Aircraft) Regulations on an airframe or any related part or appliance, approve and return the airframe or any related part or appliance for service.

(3) Except as specified in sub-regulations (4) and (5), a holder of an MEL with an engine rating may perform the inspection required by the Civil Aviation (Operation of Aircraft) Regulations on an engine or propeller or any related part or appliance and approve and return the airframe or any related part or appliance for service.

(4) Except as specified in sub-regulation (5), a holder of an AMEL with a radio, electrical, instruments and compass rating may inspect, repair, maintain, function, test and return to service aircraft radio, electrical, instruments and compass systems and components respectively.

(5) A holder of an AMEL with an airframe, engine or radio, electrical, instruments and compass rating shall not supervise the maintenance, preventive maintenance or modification of or approve and return to service, any aircraft, airframe, engine, propeller, appliance, component or a part, for which the holder of an AMEL is rated unless the holder has satisfactorily performed the work concerned at an earlier date.

Recency and renewal requirements

115. (1) A holder of an aircraft maintenance engineers licence shall apply for renewal of the licence at least two months before the expiry period in a form and manner prescribed by the Authority.

(2) The holder shall have performed work comparable with that required for the grant of the licence for periods totalling at least six months during the twenty four months preceding the date of the expiry of the licence.

(3) A person who fails to renew a licence after the expiry period may do so within the next 12 months provided that the person has been continuously engaged in practical work for the entire extended period.

(4) A person who does not apply for a renewal within the extended period as provided for in sub-regulation (3) or fails to prove that the person has continuously been engaged in practical work during that period will be required to sit for an examination before the licence is renewed.

AVIATION REPAIR SPECIALIST AUTHORISATION

Eligibility requirements

116. An applicant for an aviation repair specialist authorisation shall-

- (a) be at least 18 years of age;
- (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule and interpret technical reports and maintenance publications and carry out technical discussions in the English language;
- (c) be specially qualified to perform maintenance on aircraft or aircraft components appropriate to the job for which the aviation repair specialist was employed;
- (d) be employed for a specific job requiring special qualifications by an approved maintenance organisation certificated under the Civil Aviation Authority (Approved Maintenance Organization) Regulations;
- (e) be recommended for certification by the employer of the aviation repair specialist, to the satisfaction of the Authority, as able to satisfactorily maintain aircraft or components, appropriate to the job for which the aviation repair specialist is employed; and
- (f) either-
 - (i) have at least eighteen months of practical experience in the procedures, practices, inspection methods, materials, tools, machine tools, and equipment generally used in the maintenance duties of the specific job for which the person is to be employed and certificated; or
 - (ii) have completed formal training acceptable to the Authority and specifically designed to qualify the applicant for the job on which the applicant is to be employed.

Privilege sand limitations

117. (1) An applicant for an aviation repair specialist authorisation who is employed by an approved maintenance organization shall be concurrent with the rating issued to the approved maintenance organisation limited to the specific job for which the aviation repair specialist is employed to perform, supervise or approve for return to service.

(2) An applicant for an aviation repair specialist authorization in respect of airframe, engine, avionics or other systems shall not be issued with authorisation for purposes of circumventing the process of obtaining an aircraft maintenance engineer licence (AMEL).

(3) An aviation repair specialist may perform or supervise the maintenance, preventive maintenance or alteration of aircraft, airframes, engines, propellers, appliances, components and parts appropriate to the designated speciality area for which the aviation repair specialist is authorised and rated, but only in connection with employment by a maintenance organisation approved under the Civil Aviation Authority (Approved Maintenance Organization) Regulations.

(4) An aviation repair specialist shall not perform or supervise duties unless the aviation repair specialist understands the current instructions of the employing approved maintenance organisation and the instructions for continued airworthiness, which relate to the specific operations concerned.

Display of authorisation

118. A person who holds an aviation repair specialist authorisation shall keep the authorisation within the immediate area where the person normally exercises the privileges of the authorisation and shall present it for inspection upon the request of the Authority or any other person authorised by the Authority.

Surrender of authorisation

119. A holder of an aviation repair specialist authorisation shall surrender the authorisation to the Authority when it is suspended, revoked or at the time the holder leaves the employment of the approved maintenance organisation.
Flight Radiotelephony Operator Licence

General eligibility requirements

120. (1) Except for a holder of a pilot licence, a person required to use radiotelephone apparatus aboard an aircraft shall hold a flight radiotelephony operator licence.

(2) An applicant for a flight radiotelephony operator licence shall-

- (a) be at least 17 years of age;
- (b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule;
- (c) comply with the knowledge and skill requirements for flight radiotelephone operator as contained in regulation 122; and
- (d) demonstrate a level of knowledge appropriate to the privileges granted to a holder of a flight radiotelephone operator licence.

Skill and Knowledge requirements

121. (1) An applicant for a flight radiotelephony operator licence shall pass a practical and knowledge test covering the following areas-

- (a) the ICAO spelling alphabet;
- (b) departure and position reporting;
- (c) obtaining meteorological information;

- (d) transmission and procedures of distress and urgency signals;
- (e) communication techniques and procedures;
- (f) the necessity for brevity in radiotelephony communication and priorities;
- (g) pre-flight briefing;
- (h) classification of directional finding bearings;
- (i) radiotelephony facilities and frequencies available in the flight information region (FIR);
- (j) elementary knowledge of the relationship between wavelength and frequency;
- (k) radiotelephony procedures and phraseology; and
- (l) ability to use the radio equipment of the type installed in the aircraft and including the ability to carry out emergency procedures.

(2) The knowledge test results for a radio telephone operator licence shall be valid for six months after passing the examination.

Privileges

122. A holder of a flight radiotelephony operator licence shall have the privilege to use the radiotelephone on board an aircraft.

Renewal requirements

123. A holder of a flight radiotelephony operator licence may apply for renewal of the licence if the holder has exercised the privileges of the licence in the six months preceding the date of application.

CABIN CREW MEMBER CERTIFICATE

Required certificate, ratings and qualifications

124. (1) No person shall act as a cabin crew member unless that person holds-

- (a) a cabin crew member certificate;
- (b) a rating for the specific aircraft type or is operating under the supervision of a rated cabin crew for the purpose of qualifying for the rating;
- (c) the required knowledge for the type of aircraft and operating position;
- (d) a current medical certificate class 2.

(2) A person undergoing training to qualify for a cabin crew member certificate or rating shall not-

- (a) form a part of the required minimum number of cabin crew member for that aircraft;

(b) be assigned to an operating position that requires a cabin crew member.

(3) In this regulation, operating position means a duty station assigned to the cabin crew member for execution of emergency duties.

Eligibility requirements

125. An applicant for cabin crew member certificate shall-

- (a) be at least 18 years of age;
- (b) be able to read, speak and understand the English language sufficiently to adequately carry out the responsibilities of a cabin crew member;
- (c) have completed a course of training approved by the Authority; and
- (d) have passed a knowledge test.

Knowledge requirements

126. (1) An applicant for a cabin crew member certificate shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a cabin crew member certificate, in the following subjects-

- (a) fire and smoke training to include-
 - (i) emphasis on the responsibility of cabin crew to deal promptly with emergencies involving fire and smoke and, in particular, emphasis on the importance of identifying the actual source of the fire;
 - (ii) the importance of informing the flight crew immediately, as well as the specific actions necessary for co-ordination and assistance, when fire or smoke is discovered;
 - (iii) the necessity for frequent checking of potential fire-risk areas including toilets and the associated smoke detectors;
 - (iv) the classification of fires and the appropriate type of extinguishing agents and procedures for particular fire situations, the techniques of application of extinguishing agents, the consequences of misapplication, and of use in a confined space; and
 - (v) the general procedures of ground based emergency services at aerodromes;
- (b) water survival training to include the actual donning and use of personal flotation equipment in water by each cabin crew member; before first operating on an aeroplane fitted with life-rafts or other similar equipment, training shall be given on the use of this equipment, as well as actual practice in water;
- (c) survival training appropriate to the areas of operation such as polar, desert, jungle or sea;
- (d) medical aspects and first aid to include-
 - (i) instruction on first aid and the use of first-aid kits;

- (ii) first aid associated with survival training and appropriate hygiene; and
 - (iii) the physiological effects of flying, with particular emphasis on hypoxia;
- (e) passenger handling to include the following-
- (i) advice on the recognition and management of passengers who are, or become, intoxicated with alcohol or are under the influence of drugs or are aggressive;
 - (ii) methods used to motivate passengers and the crowd control necessary to expedite an aeroplane evacuation;
 - (iii) regulations covering the safe stowage of cabin baggage, including cabin service items and the risk of the baggage becoming a hazard to occupants of the cabin or otherwise obstructing or damaging safety equipment or aeroplane exits;
 - (iv) the importance of correct seat allocation with reference to aeroplane mass and balance, with particular emphasis given on the seating of disabled passengers and the necessity of seating able-bodied passengers adjacent to unsupervised exits;
 - (v) duties to be undertaken in the event of encountering turbulence, including securing the cabin;
 - (vi) precautions to be taken when live animals are carried in the cabin;
 - (vii) dangerous goods training as prescribed in the Civil Aviation Authority (Operation of Aircraft) Regulations and the Civil Aviation Authority (Air Operator Certification and Administration) Regulations; and
 - (viii) security procedures, including the provisions of the Civil Aviation Authority (Operation of Aircraft) Regulations and the Civil Aviation Authority (Air Operator Certification and Administration) Regulations;
- (f) communication - emphasis shall be placed on the importance of effective communication between cabin crew and flight crew including technique, common language and terminology;
- (g) discipline and responsibilities-
- (i) the importance of cabin crew performing their duties in accordance with the operations manual;
 - (ii) continuing competence and fitness to operate as a cabin crew member with special regard to flight and duty time limitations and rest requirements;
 - (iii) an awareness of the aviation regulations relating to cabin crew members and the role of the Authority;
 - (iv) general knowledge of relevant aviation terminology, theory of flight, passenger distribution, meteorology and areas of operation;
 - (v) pre-flight briefing of the cabin crew member and the provision of necessary safety information with regard to their specific duties;

- (vi) the importance of ensuring that relevant documents and manuals are kept up-to-date with amendments provided by the operator;
- (vii) the importance of identifying when cabin crew members have the authority and responsibility to initiate an evacuation and other emergency procedures;
- (viii) the importance of safety duties and responsibilities and the need to respond promptly and effectively to emergency situations; and
- (h) crew resource management (CRM) to include appropriate provisions of the Civil Aviation Authority (Operation of Aircraft) Regulations in relation to cabin crew members.

(2) The knowledge test results for a cabin crew member certificate shall be valid for twelve months after passing the examination.

Skills requirements

127. An applicant for a cabin crew member certificate shall have demonstrated the ability to perform as a cabin crew member of an aircraft in the following procedures-

- (a) to execute safety duties and functions which a cabin crew member is assigned to perform in the event of an emergency or in a situation requiring emergency evacuation;
- (b) drilled and capable in the use of emergency and life saving equipment required to be carried such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment and first-aid kits;
- (c) when serving on an aeroplane operated above 10,000 feet, knowledge of the effect of lack of oxygen and, in the case of a pressurized aeroplane, physiological phenomena accompanying a loss of pressurization;
- (d) aware of the assignments and functions of the other crew members in the event of an emergency, so far as is necessary for the fulfilment of the duties of the cabin crew member;
- (e) aware of the types of dangerous goods which may, and may not be carried in a passenger cabin and has completed the dangerous goods training programme required by the Civil Aviation (Operation of Aircraft) Regulations;
- (f) knowledge about human performance as related to passenger cabin safety duties including flight crew-cabin crew co-ordination.

Privileges

128. A holder of cabin crew member certificate may-

- (a) act as a cabin crew member in aircraft of types specified in the certificate when such aircraft are engaged in commercial transport operations; and
- (b) be authorized to act as a cabin crew member instructor for issue or renewal of cabin crew certificate and aircraft type ratings.

Renewal requirements

129. A holder of a cabin crew member certificate may apply for renewal if the holder has successfully completed the annual safety and emergency procedure training approved by the Authority every 12 months.

PART X
AVIATION MEDICAL STANDARDS AND CERTIFICATION
GENERAL

Medical certificates issued by the Authority

130. The Authority may issue classes of medical certificates that are intended to indicate the minimum medical standards as follows-

- (a) class 1 applies to applicants for or holders of-
 - (i) commercial pilot licence: aeroplanes and helicopters;
 - (ii) airline transport pilot licence: aeroplanes and helicopters;
 - (iii) flight engineer licence;
- (b) class 2 applies to applicants for or holders of-
 - (i) commercial pilot licence: lighter-than-air;
 - (ii) private pilot licence: aeroplanes, helicopters and glider;
 - (iii) student pilot licence: for all aircraft; and (iv) cabin crew certificate;
- (c) class 3, applies to applicants for or holders of air traffic controller licence.

Aviation medical examiner, designation and qualifications

131. (1) The Authority may designate a medical doctor who meets the qualifications specified in sub-regulation (2) as an aviation medical examiner to conduct medical examinations for fitness of applicants for the issue or renewal of licences or certificates specified in these Regulations.

(2) For a medical doctor to be designated as an aviation medical examiner, the doctor shall-

- (a) be qualified and licensed in the practice of medicine;
- (b) have obtained aviation medicine training at an institution recognised by the Authority;
- (c) demonstrate adequate competence in aviation medicine; and
- (d) have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

(3) A medical examiner shall receive refresher training at regular intervals as prescribed by the Authority.

Delegation of authority

132. (1) The Authority may delegate to an aviation medical examiner the authority to-

- (a) accept applications for physical examinations necessary for the issue of a medical certificate under these Regulations;
- (b) examine applicants for and holders of medical certificates to determine whether the applicants meet the applicable medical standards; and
- (c) recommend the issue, renewal, denial or withdrawal of medical certificates to an applicant, based on meeting or failing to meet applicable medical standards.

(2) The Authority shall use the services of medical assessors to evaluate reports submitted to it by medical examiners.

(3) The Authority shall retain the right to reconsider any action of an aviation medical examiner.

MEDICAL CERTIFICATION PROCEDURES***Medical records***

133. (1) An applicant for a medical certificate shall, in a form and manner prescribed by the Authority, sign and furnish the medical examiner with a personally certified statement of medical facts concerning personal, familiar and hereditary history that is as complete and accurate as the knowledge of the applicant permits.

(2) Where the aviation medical examiner finds that additional medical information or history is needed, the aviation medical examiner shall request the applicant to furnish that information or authorize any clinic, hospital, physician or other person to release to the aviation medical examiner all available information or records concerning that history.

(3) Where an applicant for a medical certificate fails within a reasonable period to provide the requested medical information or history or fails to authorise the release of information or records so requested, the Authority may deny the application as well as suspend, modify or revoke all medical certificates held by the applicant.

(4) Where a medical certificate is suspended or modified under sub- regulation (3), the suspension or modification remains in effect until-

- (a) the holder provides the requested information, history, or authorisation to the Authority; and
- (b) the Authority determines that the holder meets the medical standards.

Aviation medical examiner to submit signed medical evaluation report

134. (1) An aviation medical examiner who is authorized to conduct a medical examination under regulation 131 shall-

- (a) sign the required report and medical certificate and submit directly to the Authority the full details in the form and manner prescribed by the Authority;
- (b) report to the Authority any individual case where in the judgment of the aviation medical examiner, an applicant has failed to meet any requirement that is likely to jeopardize flight safety; and

- (c) having commenced a medical evaluation of an applicant, submit to the Authority the report, whether the evaluation is terminated prior to completion, yielded sub-standard results, or was completed satisfactorily.

(2) If the medical report is submitted to the Authority in electronic format, adequate identification of the examiner shall be established.

Issue of Medical certificate

135. (1) An aviation medical examiner shall issue the applicable medical certificate to any person who meets the medical standards prescribed in these Regulations, based on medical examination and evaluation of the history and condition of the applicant.

(2) A person to be issued with a medical certificate shall undergo a medical examination based on the physical and mental standards contained in these Regulations.

Denial of medical certificate

136. (1) An applicant for a medical certificate may be denied a certificate if, upon medical examination, the applicant does not meet the physical and mental standards specified in these Regulations.

(2) The denial of the medical certificate is effective-

- (a) on the date of the medical evaluation that determined that the applicant did not meet the physical and mental standards specified in these Regulations; and
- (b) until the time that the applicant is again determined by the Authority to be fit to exercise the privileges through-
 - (i) an accredited medical conclusion;
 - (ii) a special flight test; or
 - (iii) with respect to a transient condition, until a subsequent satisfactory report is acceptable to the Authority.

(3) An applicant who is denied a medical certificate by an aviation medical examiner may, within thirty days after the date of the denial, apply in writing to the Authority for reconsideration of the denial.

(4) Upon receiving an application for reconsideration, the Authority shall appoint more than one medical examiner to conduct medical examination on the applicant and shall designate one of the medical examiners to be responsible for coordinating the results of the examination, evaluation and findings with regard to medical fitness, and signing the report.

(5) Where the applicant does not apply for reconsideration during the thirty day period after the date of the denial, the Authority shall assume that the applicant has withdrawn the application for a medical certificate.

Issue of special medical certificate with a limitation

138. (1) The Authority may issue a medical certificate with a limitation to an applicant who does not meet the applicable standards for a medical certificate if the applicant shows to the satisfaction of the Authority that-

- (a) an accredited medical conclusion indicates that in special circumstances the failure of the applicant to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize flight safety; and
- (b) relevant ability, skill and experience of the applicant and operational conditions have been given due consideration.

(2) The Authority shall issue a medical limitation on a licence when the Authority or an aviation medical examiner determines the safe performance of the duties of the licence holder is dependent on compliance with such a limitation.

Validity of medical certificate

139. (1) A class 1 medical certificate issued to an applicant who is-

- (a) under the age of forty years shall be valid for twelve months from the day the medical examination is performed; and
- (b) forty years of age or more shall be valid for six months from the day the medical examination is performed.

(2) A class 2 medical certificate issued to an applicant who is-

- (a) under the age of 40 years shall be valid for 24 months from the day the medical examination is performed;
- (b) 40 years of age or more shall be valid for 12 months from the day the medical examination is performed.

(3) A class 3 medical certificate issued to an applicant who is-

- (a) under the age of 40 years shall be valid for 24 months from the day the medical examination is performed; and
- (b) 40 years of age or more shall be valid for 12 months from the day the medical examination is performed.

Renewal of medical certificate

140. (1) The requirements for the renewal of a medical certificate are the same as those for the initial assessment except where otherwise specifically stated.

(2) When required to obtain or renew correcting lenses, the applicant for medical examination shall advise the aviation medical examiner conducting the medical examination of the new prescription, including revised reading distances-

- (a) for a class 1 medical certificate, for the visual cockpit tasks relevant to the types of aircraft in which the applicant is likely to function;
- (b) for a class 2 medical certificate, for the visual cockpit and cabin tasks relevant to the types of aircraft in which the applicant is likely to function; and

- (c) for a class 3 medical certificate, for the air traffic control duties the applicant is to perform.

Prohibition of medical certification

141. No person shall hold or be issued with a medical certificate if that person suffers from any disease or disability that could render that person likely to become suddenly unable to either perform assigned duties safely or operate an aircraft safely.

Medical requirements

142. No person shall hold or be issued with a medical certificate if that person-

- (a) has any organic, functional or structural disease, defect or limitation (active, latent, acute or chronic);
- (b) has any wound, injury or sequelae from operation; or
- (c) uses any prescribed or non-prescribed medication or other treatment that, based on the case history and appropriate qualified medical judgement relating to the condition involved, the Authority finds that the medication or treatment-
 - (i) makes the person unable to safely perform the duties or exercise the privileges of the licence or rating applied for or held; or
 - (ii) may reasonably be expected, for the maximum duration of the medical certificate applied for or held, to make the applicant unable to perform the duties or exercise the privileges of the licence or rating.

Physical and Mental requirements

143. (1) An applicant for a medical certificate shall be free from-

- (a) any abnormality, congenital or acquired;
- (b) any active, latent, acute or chronic disability;
- (c) any wound, injury or sequelae from operation; or
- (d) any effect or side-effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken that would entail a degree of functional incapacity which is likely to interfere with the safe operation of an aircraft or with the safe performance of duties.

(2) An applicant for a medical certificate shall not suffer from any disease or disability which could render the applicant likely to become suddenly unable to perform assigned duties safely and in the case of an applicant for a class 1 or 2 medical certificate, to operate an aircraft safely.

(3) An applicant shall have no established medical history or clinical diagnosis of-

- (a) an organic mental disorder;
- (b) a mental or behavioural disorder due to the use of psychoactive substances including dependence syndrome induced by alcohol or other psychoactive substances;

- (c) schizophrenia or schizotypal or delusional disorder;
- (d) a mood (affective) disorder;
- (e) a neurotic, stress-related or somatoform disorder;
- (f) a behavioural syndrome associated with psychological disturbances or physical factors;
- (g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
- (h) mental retardation;
- (i) a disorder of psychological development;
- (j) a behavioural or emotional disorder with onset in childhood or adolescence; or
- (k) a mental disorder not otherwise specified that might render the applicant unable to safely exercise the privileges of the licence applied for or held.

Hearing test requirements

144. (1) A person holding or being issued with a medical certificate shall be required to demonstrate a hearing performance sufficient for the safe exercise of the licence or rating privileges.

(2) An applicant for a medical certificate shall be tested by pure-tone audiometry at first issue for class 1 not less than once every five years, and for class 3 not less than once every four years, up to the age of 40 years, after that not less than once every two years.

(3) An applicant for a class 2 medical certificate shall be tested by pure-tone audiometry at first issue and, after the age of 50 years, not less than once every two years.

(4) Alternatively, other methods providing equivalent results may be used.

(5) At a medical examination where audiometry is not performed, an applicant shall be tested in a quiet room by whispered and spoken voice tests.

Issue of medical certificate for persons under oral drugs

145. A medical certificate may be issued to an applicant where oral drugs are administered under conditions permitting appropriate medical supervision and control and which, according to an accredited medical conclusion, are compatible with the safe exercise of the licence of the applicant and rating privileges.

Visual requirements: general

146. (1) A person holding or being issued with a medical certificate shall have-

- (a) normally functioning eyes and adnexae;
- (b) normal fields of vision, normal binocular function; and
- (c) no active pathological condition, acute or chronic, nor sequelae of surgery or trauma of the eyes or their adnexae, which is likely to jeopardize flight safety.

(2) A person with reduced stereopsis, abnormal convergence not interfering with near vision and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia shall not be disqualified.

Vision testing requirements

147. (1) The corrected and uncorrected visual acuity shall be measured and recorded at each examination.

(2) An applicant for a medical examination who uses contact lenses need not have uncorrected visual acuity measured at each re-examination if the history of the contact lens prescription is known.

(3) The test for visual acuity shall comply with the following-

- (a) for a visual acuity test in a lighted room, use a test illumination level of approximately 50 lx, normally corresponding to a brightness of 30 cd per square metre;
- (b) visual acuity shall be measured by means of a series of optotypes of landolt or similar optotypes, placed at a distance of six metres from the applicant, or five metres as appropriate.

(4) The Authority may require a separate ophthalmic report before the issue of a medical certificate.

(5) The conditions which indicate a need to obtain an ophthalmic report include-

- (a) a substantial decrease in the uncorrected visual acuity;
- (b) any decrease in best corrected visual acuity; and
- (c) the occurrence of eye disease, eye injury or eye surgery.

Acceptability of correcting lenses

148. (1) A person may meet the visual acuity fitness for near or distant vision by using correcting lenses.

(2) Correcting spectacles may be used if-

- (a) not more than one pair of correcting spectacles is used to demonstrate compliance with visual acuity requirements;
- (b) single-vision near correction lenses (full lenses of one power only, appropriate to reading) are not used for both near and distance vision; and
- (c) in order to read the instruments and a chart or manual held in the hand and to make use of distant vision through the windscreen without removing the lenses, the spectacles are as appropriate-
 - (i) "look-over;"
 - (ii) bifocal, or
 - (iii) trifocal.

(3) An applicant for medical examination may use contact lenses to meet the distance vision acuity requirement if the lenses are-

- (a) mono-focal;
- (b) non-tinted; and
- (c) well tolerated.

(4) A person issued with a medical certificate that requires correcting lenses or spectacles shall have a limitation placed on the document requiring that person, while exercising the privileges of the licence or certificate, as appropriate-

- (a) to wear the distant-correction lenses at all times;
- (b) to have readily available and use the near-correction spectacles as necessary to accomplish near vision functions; and
- (c) to have a second pair of suitable spectacles (distant or near-correction, as appropriate) available for immediate use.

Distance vision requirements

149. (1) A person issued with a medical certificate shall have a distant visual acuity, with or without correcting lenses of at least-

- (a) 6/9 with binocular visual acuity of 6/6 or better, for class 1 medical certificate;
- (b) 6/12 with binocular visual acuity of 6/9 or better, for class 2 medical certificate; or
- (c) 6/9 with binocular visual acuity of 6/6 or better, for class 3 medical certificate.

(2) Uncorrected distance visual acuity is not a limiting factor.

(3) An applicant for a medical certificate with a large refractive error shall use contact lenses or high-index spectacle lenses.

(4) Where spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(5) An applicant for a medical certificate whose uncorrected distant visual acuity in either eye is worse than 6/60 shall provide a full ophthalmic report prior to initial medical evaluation and every five years after that.

(6) An applicant for a medical certificate who has undergone surgery affecting the refractive status of the eye shall be free of sequelae likely to interfere with the safe exercise of the licence privileges of the applicant.

Near vision requirements

150. (1) A person issued with a medical certificate shall meet the following minimum visual standards for near visual acuity to read, with or without corrective lenses, an-

- (a) N14 chart or its equivalent at a distance of 100 centimetres, with "N14" referring to "Times Roman" font; and

- (b) N5 chart at a distance of 30 to 50 cm as selected by the applicant, with "N5" referring to "Times Roman" font.

(2) Where the near-vision requirements are met only by the use of near-correction and the applicant also needs distant-correction, both corrections shall be added to a pair of spectacles to be used to meet the requirements.

(3) When required to obtain or renew correcting lenses, an applicant for a medical certificate shall advise the aviation medical examiner of reading distances for the duties the applicant is to perform.

(4) When required to obtain or renew correcting lenses, an applicant for a medical certificate shall advise the aviation medical examiner of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

Colour perception requirements

151. (1) An applicant for a medical certificate shall demonstrate the ability to readily perceive colours the perception of which is necessary for the safe performance of duties.

(2) An applicant shall be able to correctly identify a series of pseudoisochromatic plates (tables) in daylight or in artificial light of the same colour temperature such as that provided by Illuminate "C" or "D65" as specified by the International Commission on Illumination.

(3) An applicant failing to obtain a satisfactory score in a test under subsection (2) may nevertheless be assessed as fit if the applicant is able to readily and correctly identify aviation coloured lights displayed by means of a recognized colour perception lantern in a special test conducted by the aviation medical examiner (AME).

(4) An applicant for a medical certificate unable to satisfactorily complete the special test required in sub regulation (3)-

- (a) shall only be eligible for a class 2 medical certificate with the following restriction: "valid for day operations only;" and
- (b) shall be advised that any sunglasses worn during the exercise of the privileges shall be non-polarizing and of a neutral grey tint.

Ear and related structures

152. (1) No person shall hold or be issued with a medical certificate if that person-

- (a) possesses any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the licence or rating privileges of the applicant;
- (b) except for a class 3 medical certificate-
 - (i) has disturbance of vestibular function;
 - (ii) has significant dysfunction of the Eustachian tubes;
 - (iii) has unhealed perforation of the tympanic membranes; and
 - (iv) has nasal obstruction;

(b) has malformation or any disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the licence and rating privileges of the applicant.

(2) Except for a class 3 medical certificate, a single dry perforation of the tympanic membrane shall not render a person unfit.

Hearing requirements

153. (1) An applicant for a medical certificate when tested on a pure-tone audiometer shall not have a hearing loss, in either ear separately, of more than 35 decibel (dB) at any of the frequencies 500, 1000 or 2000 hertz (Hz) or more than 50 dB at 3000 Hz.

(2) Except for a class 2 medical certificate, an applicant with a hearing loss greater than that specified in sub-regulation (1) may be declared fit if the applicant has normal hearing performance against a background noise that reproduces or simulates the masking properties of cockpit noise upon speech and beacon signals.

(3) No person shall hold or be issued with a class 2 medical certificate if that person is unable to hear an average conversational voice in a quiet room using both ears, at a distance of two metres from the examiner and with the back turned to the examiner.

Cardiovascular: general

154. (1) No person shall hold or be issued with a medical certificate if that person has any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the licence or rating privileges.

(2) An applicant who has undergone coronary by-pass grafting or angioplasty with or without stenting or other cardiac intervention or who has a history of myocardial infarction or suffers from any other potentially incapacitating cardiac condition shall not hold or be issued with a medical certificate unless the cardiac condition of the applicant has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the licence or rating privileges of the applicant.

(3) An applicant for a medical certificate with an abnormal cardiac rhythm shall not hold or be issued a medical certificate unless the cardiac arrhythmia has been investigated and evaluated with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Blood pressure and circulation

155. No person shall hold or be issued with a medical certificate if that person has-

- (a) systolic and diastolic blood pressures outside normal limits; or
- (b) a significant functional or structural abnormality of the circulatory system.

Electrocardiography examination

156. (1) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate.

(2) Electrocardiography shall be included in a re-examination of an applicant for a medical certificate over the age of fifty years no less frequently than two years, except for a class 1 medical certificate which shall be annually.

Neurological requirements

157. (1) No person shall hold or be issued with a medical certificate if that person has a medical history or clinical diagnosis of any of the following-

- (a) a progressive or non-progressive disease of the nervous system, the effect of which, is likely to interfere with the safe exercise of the licence or rating privileges of the applicant;
- (b) epilepsy; or
- (c) any disturbance of consciousness without satisfactory medical explanation of cause.

(2) No person shall hold or be issued with a medical certificate if that person has suffered any head injury, the effects of which, are likely to interfere with the safe exercise of the licence and rating privileges of the applicant.

Respiratory capability

158. (1) No person shall hold or be issued with a medical certificate if that person has an established medical history or clinical diagnosis of-

- (a) disability of the lungs or any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms during normal or emergency operations;
- (b) active pulmonary tuberculosis; and
- (c) asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations.

(2) Unless there is an accredited medical conclusion indicating that the use of drugs for control of asthma is not likely to interfere with the safe exercise of the license or rating privileges of the applicant, the use of that drug shall be disqualifying.

(3) An applicant with chronic obstructive pulmonary disease shall be assessed as unfit unless the condition of the applicant has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the licence or rating privileges of the applicant.

(4) An applicant with quiescent or healed lesions which are known to be tuberculosis or are presumably tuberculosis in origin, may be assessed as fit.

Radiology (X-ray) evaluation

159. A radiography evaluation shall be accomplished during the initial chest examination and be conducted as necessary in subsequent medical examinations where there are historical chest cavity issues, symptoms or doubtful clinical cases.

Vestibular apparatus

160. (1) No person shall hold or be issued with a medical certificate if that person has an established medical history or clinical diagnosis of any of the following medical conditions-

- (a) active acute or chronic pathological process of the internal ear or of the middle ear;

- (b) a disease or condition of the middle or internal ear, nose, oral cavity, pharynx or larynx that-
 - (i) interferes with or is aggravated by, flying or may reasonably be expected to do so; or
 - (ii) interferes with, or may reasonably be expected to interfere with clear and effective speech communication;
- (c) a disease or condition manifested by or that may reasonably be expected to be manifested by, vertigo or a disturbance of equilibrium;
- (d) permanent disturbances of the vestibular apparatus; or
- (e) permanent obstruction to Eustachian tubes.

(2) Unless there is an accredited medical conclusion indicating that the condition is not likely to affect the safe exercise of the license or rating privileges of the applicant, the following medical conditions are disqualifying-

- (a) acute or chronic impairment of nasal air entry on either side; or
- (b) serious malformation or serious, acute or chronic affection of the buccal cavity or upper respiratory tract.

Bones, muscles and tendons

161. No person shall hold nor be issued with a medical certificate if that person possesses any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the licence or rating privileges of the applicant.

Endocrine system

162. No person shall hold or be issued with a medical certificate if that person has an established medical history or clinical diagnosis of any metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of the licence or rating privileges.

Diabetic applicant

163. No person shall hold nor be issued with a medical certificate if that person has an established medical history or clinical diagnosis of-

- (a) insulin treated diabetes mellitus; or
- (b) non-insulin treated diabetes mellitus,

unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of that person's licence or rating privileges.

Gastrointestinal and digestive tract

164. (1) No person shall hold, nor be issued with a medical certificate if that person has an established medical history or clinical diagnosis of any of the following medical conditions-

- (a) significant impairment of function of the gastrointestinal tract or its adnexa;
- (b) sequelae of disease of, or surgical intervention on, any part of the digestive tract or its adnexae, likely to cause incapacitation in flight, in particular, obstruction due to stricture or compression; or
- (c) hernias that might give rise to incapacitating symptoms except for a class 3 medical certificate.

(2) Unless there is an accredited medical conclusion indicating that the effects of the operation are not likely to cause incapacitation in flight, an applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs that may cause incapacity in flight shall not hold, nor be issued with a medical certificate.

Kidneys and urinary tract

165. (1) No person shall hold or be issued with a medical certificate if that person has an established medical history or clinical diagnosis of genitor-urinary disease, unless adequately investigated and the condition found unlikely to interfere with the safe exercise of the licence or rating privileges of the person.

(2) A urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(3) No person shall hold or be issued with a medical certificate if that person has-

- (a) any sequelae of diseases of or surgical procedures on the kidneys or the genitor-urinary tract, in particular obstructions due to stricture or compression, unless the condition has been investigated and evaluated in accordance with the best medical practice and is assessed not likely to interfere with the safe exercise of the licence or rating privileges of that person; or

(b) undergone nephrectomy unless the condition is well compensated.

Lymphatic glands or disease of the blood

166. An applicant for a medical certificate with diseases of the blood or the lymphatic system shall be assessed as unfit unless adequately investigated and the condition found unlikely to interfere with the safe exercise of the licence or rating privileges of the applicant.

Gynaecological conditions

167. An applicant for a medical certificate who has a gynaecological disorder that is likely to interfere with the safe exercise of the licence or rating privileges of the applicant shall be assessed as unfit.

Pregnancy

168. (1) An applicant for a medical certificate who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low risk uncomplicated pregnancy.

(2) For an applicant with a low-risk uncomplicated pregnancy evaluated and supervised in accordance with sub-regulation (1), the fit certificate shall, in the case of a class 1 or 2 medical certificate, be limited to the period from the end of the 12th week to the end of the 26th week of gestation and in the case of a class 3 medical certificate, be limited until the period until the end of the 34th week of gestation.

(3) Following confinement or termination of pregnancy, an applicant shall not be permitted to exercise the privileges of a licence until the applicant has undergone evaluation in accordance with best medical practice and it is determined that the applicant is able to safely exercise the privileges of the licence or ratings.

Speech defects

169. An applicant for a medical certificate with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

Acquired Immunodeficiency Syndrome

170. (1) An applicant for a medical certificate with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.

(2) An applicant for a medical certificate who is sero-positive for human immunodeficiency virus (HIV) shall be assessed as unfit unless a full investigation provides no evidence of clinical disease.

PART XI GENERAL

Possession of a licence

171. (1) A holder of a licence, certificate or authorization issued by the Authority shall always have the licence, certificate or authorisation in physical possession or at the work site when exercising the privileges of that licence, certificate or authorisation.

(2) A crew member of a foreign registered aircraft shall hold a valid licence, certificate or authorization, including an appropriate and current medical certificate, issued by the State of Registry and has it in physical possession or at the work station when exercising the privileges of that licence, certificate or authorisation.

Use of psychoactive substances

172. (1) A holder of a licence, rating or certificate issued under these Regulations shall not exercise the privileges of the licence, rating or certificate while under the influence of any psychoactive substance, by reason of which human performance is impaired.

(2) A person whose function is critical to the safety of aviation (safety-sensitive personnel) shall not undertake that function while under the influence of any psychoactive substance, by reason of which human performance is impaired.

(3) A person referred to in sub-regulation (1) or (2) shall not engage in any kind of problematic use of substances.

Drug and alcohol testing and reporting

173. (1) A person who performs any function requiring a licence, rating, qualification or authorisation prescribed by these Regulations directly or by contract may be tested for drug or alcohol usage.

(2) A person who refuses to submit to a test to indicate the percentage by weight of alcohol in the blood when requested by a law enforcement officer or the Authority or refuses to furnish or to authorise the release of the test results requested by the Authority shall-

- (a) be denied a licence, certificate, rating, qualification or authorisation issued under these Regulations for a period of up to one year from the date of that refusal; or
- (b) have the licence, certificate, rating, qualification or authorisation issued under these Regulations suspended or revoked.

(3) A person who refuses to submit to a test to indicate the presence of narcotic drugs, marijuana or depressant or stimulant drugs or substances in the body, when requested by a law enforcement officer or the Authority or refuses to furnish or to authorise the release of the test results requested by the Authority shall-

- (a) be denied a licence, certificate, rating, qualification or authorisation issued under these Regulations for a period of up to one year from the date of that refusal; or
- (b) have the licence, certificate, rating, qualification or authorisation issued under these Regulations suspended or revoked.

(4) A person who is convicted for the violation of any local or national statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana or depressant or stimulant drugs or substances, shall-

- (a) be denied a license, certificate, rating, qualification or authorisation issued under these Regulations for a period of up to one year after the date of conviction; or
- (b) have the licence, certificate, rating, qualification or authorisation issued under these Regulations suspended or revoked.

Inspection of licences, certificates and authorizations

174. A person who holds a licence, certificate or authorisation required by these Regulations shall present it for inspection upon a request from the Authority or any person authorised by the Authority.

Change of name

175. (1) A holder of a licence, certificate or authorisation issued under these Regulations may apply to change the name on a licence or certificate.

(2) The holder shall include with any request made under sub-regulation (1)-

- (a) the current licence or certificate; and
- (b) a court order or other legal document verifying the name change;

(3) The Authority may change the licence, certificate or authorisation and issue a replacement.

(4) The Authority shall return to the holder the original documents specified in sub-regulation 2(b) and retain copies and return the replaced licence, certificate or authorisation with the appropriate endorsement.

Change of address

176. A holder of a licence, certificate, or authorization issued under these Regulations shall notify the Authority of the change in the physical and mailing address and shall do so in the case of-

- (a) physical address, at least fourteen days in advance;
- (b) mailing address, upon the change.

Replacement of documents

177. A person may apply to the Authority in the prescribed form for replacement of documents issued under these Regulations if the documents are lost or destroyed.

Suspension and revocation of documents

178. (1) The Authority may, where it considers it to be in the public interest, suspend provisionally, pending further investigation, any licence, certificate, approval, permission, exemption, authorisation or other document issued, granted or having effect under these Regulations.

(2) The Authority may, upon the completion of an investigation which has shown sufficient ground to its satisfaction and where it considers it to be in the public interest, revoke, suspend or vary any licence, certificate, approval, permission, exemption, authorisation or other document issued or granted under these Regulations.

(3) The Authority may, where it considers it to be in the public interest, prevent any person or aircraft from flying.

(4) A holder or any person having possession or custody of any licence, certificate, approval, permission, exemption, authorisation or other document which has been revoked, suspended or varied under these Regulations shall surrender it to the Authority within 14 days from the date of revocation, suspension or variation.

(5) The breach of any condition subject to which any licence, certificate, approval, permission, exemption, authorisation or any other document has been granted or issued under these Regulations shall render the document invalid during the continuance of the breach.

Use and retention of documents and records

179. (1) No person shall-

- (a) use any licence, certificate, approval, permission, exemption, authorisation or other document issued or required by or under these Regulations which has been forged, altered, revoked or suspended or to which the person is not entitled;
- (b) forge or alter any licence, certificate, approval, permission, exemption, authorisation or other document issued or required by or under these Regulations;
- (c) lend any licence, certificate, approval, permission, exemption, authorisation or other document issued or required by or under these Regulations to any other person; or
- (d) make any false representation for the purpose of procuring for that person or any other person the grant issue renewal or variation of any licence, certificate, approval, permission or exemption, authorisation or other document.

(2) During the period for which it is required under these Regulations to be preserved, no person shall mutilate, alter, render illegible or destroy any records or any entry made in the records, required by or under these Regulations to be maintained or knowingly make or procure or assist in the making of any false entry in any record or wilfully omit to make a material entry in a record.

(3) A record required to be maintained by or under these regulations shall be recorded in a permanent and indelible material.

(4) No person shall issue any certificate, document or exemption under these Regulations unless the person is authorised to do so by the Authority.

(5) No person shall issue any certificate of the kind referred to in sub-regulation (4) unless that person is satisfied that all statements in the certificate are correct, and that the applicant is qualified to hold that certificate.

Reports of violation

180. (1) A person who knows of a violation of the Civil Aviation Authority Act or any regulations or orders made under the Act, shall report to the Authority.

(2) The Authority will determine the nature and type of any additional investigation or enforcement action that needs to be taken.

Enforcement of directions

181. A person who fails to comply with any direction given by the Authority or by any authorised person under any provision of these Regulations shall be deemed for the purposes of these Regulations to have contravened that provision.

Aeronautical user fees

182. (1) The Authority may notify the fees to be charged in connection with the issue, validation, renewal, extension or variation of any certificate, licence or other document, including the issue of a copy or the undergoing of any examination, test, inspection or investigation or the grant of any permission or approval, required by or for the purpose of these Regulations or any orders, notices or proclamations made under the regulations.

(2) Upon an application being made in connection with which any fee is chargeable in accordance with sub-regulation (1), the applicant shall be required, before the application is accepted, to pay the fee chargeable.

(3) If, after payment has been made, an application is withdrawn by the applicant or otherwise ceases to have effect or is refused, the Authority shall not refund the payment made.

Application of regulations to Government and visiting forces

183. (1) These Regulations shall apply to aircraft, not being military aircraft, belonging to or exclusively employed in the service of the Government and for the purposes of that application, the Department or other authority responsible for the management of the aircraft shall be deemed to be the operator of the aircraft and in the case of an aircraft belonging to the Government, to be the owner of the interest of the Government in the aircraft.

(2) Except as otherwise expressly provided, the naval, military and air force authorities and member of any visiting force and property held or used for the purpose of that force shall be exempt from the provisions of these Regulations to the same extent as if the visiting force

formed part of the military force of Swaziland.

Extra territorial application of Regulations

184. Except where the context otherwise requires, these Regulations-

- (a) in so far as they apply, whether by express reference or otherwise, to aircraft registered in Swaziland, shall apply to that aircraft wherever they may be;
- (b) in so far as they apply, whether by express reference or otherwise, to other aircraft, shall apply to that aircraft when they are within Swaziland;
- (c) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything by any person in or by any of the crew of, any aircraft registered in Swaziland, shall apply to that person and crew, wherever they may be; and
- (d) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything in relation to any aircraft registered in Swaziland by other persons shall, where the persons are citizens of Swaziland, apply to them wherever they may be.

**PART XII
EXEMPTIONS**

Requirements for Application

185. (1) A person may apply to the Authority for an exemption from any of these Regulations.

(2) An application for an exemption shall be submitted at least 60 days in advance of the proposed effective date, to obtain timely review.

(3) A request for an exemption shall contain the following details of the applicant-

- (a) name;
- (b) physical address and mailing address;
- (c) telephone number;
- (d) fax number if available; and
- (e) email address if available.

(4) The application shall be accompanied by a fee specified by the Authority.

Substance of the request for exemption

186. (1) An application for an exemption shall contain the following-

- (a) a citation of the specific requirement from which the applicant seeks exemption;

- (b) an explanation of why the exemption is needed;
 - (c) a description of the type of operations to be conducted under the proposed exemption;
 - (d) the proposed duration of the exemption;
 - (e) an explanation of how the exemption will be in the public interest, that is, benefits the public as a whole;
 - (f) a detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the regulation in question;
 - (g) a review and discussion of any known safety concerns with the requirement, including information about any relevant accidents or incidents of which the applicant is aware; and
 - (h) if the applicant seeks to operate under the proposed exemption outside of the airspace of Swaziland, an indication whether the exemption would contravene any provision of the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO) as well as the Regulations pertaining to the airspace in which the operation will occur.
- (2) Where the applicant seeks emergency processing, the application shall contain supporting facts and reasons that the application was not timely filed and the reasons why it is an emergency.
- (3) The Authority may deny an application if the Authority finds that the applicant has not justified the failure to apply for an exemption on time.

REVIEW, PUBLICATION AND ISSUE OR DENIAL OF THE EXEMPTION

Initial review by the Authority

187. (1) The Authority shall review an application for accuracy and compliance with the requirements of regulations 185 and 186.

(2) If an application appears on its face to satisfy the provisions of this regulation and the Authority determines that a review of its merits is justified, the Authority will publish a detailed summary of the application in either the Gazette, aeronautical information circular or at least one local daily newspaper for comment and specify the date by which comments shall be received by the Authority for consideration.

(3) Where the filing requirements of regulations 185 and 186 have not been met, the Authority will notify the applicant and take no further action until the applicant corrects the application and re-files it in accordance with these Regulations.

(4) If the request is for emergency relief, the Authority shall publish the application or the decision of the Authority as soon as possible after processing the application.

Evaluation of the request

188. (1) After initial review, if the filing requirements have been satisfied, the Authority shall conduct an evaluation of the request to determine-

- (a) whether an exemption would be in the public interest;
- (b) whether the proposal of the applicant would provide a level of safety equivalent to that established by the regulation, although where the Authority decides that a technical evaluation of the request would impose a significant burden on the technical resources of the Authority, the Authority may deny the exemption on that basis;
- (c) whether a grant of the exemption would contravene the applicable ICAO Standards and Recommended Practices; and
- (d) whether the request should be granted or denied and of any conditions or limitations that shall be part of the exemption.

(2) The Authority shall notify the applicant by letter and publish a detailed summary of its evaluation and decision to grant or deny the request.

(3) The summary referred to in sub-regulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

(4) If the exemption affects a significant population of the aviation community of Swaziland the Authority shall publish the summary in an aeronautical information circular.

PART XIII OFFENCES AND PENALTIES

Contravention of Regulations

189. A person who contravenes a provision of these Regulations may have a licence, certificate, approval, authorisation, exemption or other document revoked or suspended.

Offences and penalties

190. (1) If any provision of these Regulations, orders, notices or proclamations made under these regulations is contravened in relation to an aircraft, the operator of that aircraft and the pilot in command, if the operator or the PIC is not the person who contravened that provision shall, without prejudice to the liability of any other person under these Regulations for that contravention, be deemed to have contravened that provision unless the operator or pilot in command proves that the contravention occurred without their consent or connivance and that all due diligence was exercised to prevent the contravention.

(2) A person who contravenes any provision specified as an "A" provision in the Third Schedule commits an offence and is liable on conviction to a fine not exceeding fifty thousand Emalangeni for each offence or to imprisonment for a term not exceeding one year or to both.

(3) A person who contravenes any provision specified as a "B" provision in the Third Schedule commits an offence and is liable on conviction to a fine not exceeding one hundred thousand Emalangeni for each offence or to imprisonment for a term not exceeding three years or to both.

(4) A person who contravenes a provision of these Regulations not being a provision referred to in the Third Schedule, commits an offence and is liable on conviction to a fine not exceeding one hundred thousand Emalangeni and in the case of a second or subsequent conviction for a similar offence to a fine not exceeding two hundred thousand Emalangeni or to a term of imprisonment not exceeding four years or to both..

PART XIV
TRANSITION AND SAVINGS

Transition and savings

192. A valid licence, certificate, permit or authorization issued or granted by the Authority before the commencement of these Regulations shall remain operational until it expires or is revoked, annulled or replaced.

FIRST SCHEDULE
(Regulations 6(1), 17)

LANGUAGE PROFICIENCY REQUIREMENTS

(1) To meet the language proficiency requirements contained in regulation 6, an applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to the Authority, compliance with the holistic descriptors at paragraph (2) and with the Operational Level (Level 4) of the Language Proficiency Rating Scale in paragraph (3).

(2) Holistic descriptors - proficient speakers shall:

- (a) communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
- (b) communicate on common, concrete and work-related topics with accuracy and clarity;
- (c) use appropriate communicative strategies to exchange Messages and to recognize and resolve misunderstandings (e.g. to check, confirm, or clarify information) in a general or work-related context;
- (d) handle successfully and with relative ease the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar; and
- (e) use a dialect or accent which is intelligible to the aeronautical community.

(3) Rating scales:

(a) Operational Level (Level 4):

- (i) Pronunciation: Pronunciation, stress, rhythm and intonation are influenced by the first language or regional variation but only sometimes interfere with understanding.
- (ii) Structure: Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.
- (iii) Vocabulary: Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.

(iv) **Fluency:** Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.

(v) **Comprehension:** Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.

(vi) **Interactions:** Responses are usually immediate, appropriate and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming or clarifying.

(b) Extended Level (Level 5)

(i) **Pronunciation:** Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.

(ii) **Structure:** Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.

(iii) **Vocabulary:** Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.

(iv) **Fluency:** Able to speak at length with relative ease on familiar topics, but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.

(v) **Comprehension:** Comprehension is accurate on common, concrete, and work related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.

(vi) **Interactions:** Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship effectively.

(c) Expert Level (Level 6)

(i) **Pronunciation:** Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.

(ii) **Structure:** Both basic and complex grammatical structures and sentence patterns are consistently well controlled.

(iii) **Vocabulary:** Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.

- (iv) **Fluency:** Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.
- (v) **Comprehension:** Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.
- (vi) **Interactions:** Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues, and responds to them appropriately.

SECOND SCHEDULE

(Regulation 112)

KNOWLEDGE AND SKILL REQUIREMENTS FOR AIRCRAFT MAINTENANCE ENGINEERS LICENSING

1. The subjects relevant to the knowledge and skill requirements for all Licence Categories specified in regulation 4(5) are presented in this Schedule in a Modular format.
2. The examinations for each Category of Licence and its Sub-Divisions where appropriate, shall be based on a number of the Modules as indicated in the Module/Category relationship set out in the Table below.
3. From the Table it will be noted that the modular arrangements recognise that major areas of the subjects are common to more than one Licence Category or its Sub-Divisions. Thus, when an existing Licence is to be extended to include another Category or Sub-Division, those Modules that have been satisfied by previous examinations may be excluded.
4. Each module is numbered and contains a series of syllabus subject headings. Each subject is then further expanded in more detail against 'level numbers' corresponding to Licence Without Type Rating (LWTR) and Type Rating (TR). This expansion of detail provides an indication of the degree/level of knowledge, experience, competence and skill in aeronautical engineering required by the Regulations.
5. There are three level numbers and they are defined as follows:
 - (a) Level1: General appreciation of principles and familiarisation of the subject;
 - (b) Level2: Comprehension of principles and salient features with a practical ability to assess operational condition;
 - (c) Level 3: Detailed knowledge of all aspects of the subject.
6. In applying the above levels to the subjects which, in particular relate to aircraft, engines, systems and items of equipment, the following aspects shall be taken into account:
 - (a) theoretical principles;
 - (b) constructional arrangements, functional and design features;
 - (c) maintenance practices;
 - (d) normal deteriorated and failed conditions.

THIRD SCHEDULE
OFFENCES AND PENALTIES

REG NO:	TITLE	PART
8	Validity of licences	A
9	Decrease in medical fitness	A
12	Curtailement of privileges of pilots	A
29	General requirements for pilot licences, ratings and authorizations	A
31	Solo flight requirements	A
32	Privileges and limitations (SPL)	A
39	PPL: privileges and limitations	A
52	ATPL: privileges and limitations	A
56	Type ratings	A
59	Night rating: general eligibility requirements	A
63	Instrument rating: general eligibility requirements	A
73	Trainee records	A
76	Flight instructor: limitations and qualifications	A
81	Flight engineer: licences and ratings required	A
89	ATC: required licences and ratings or qualifications	A
94	ATC: privileges and limitations	A
95	Privileges of ATC ratings	A
97	ATC: maximum working hours	A
98	Responsibilities over fatigue	A
99	Prohibition of unlicensed air traffic controllers	A
117	ARS: Privileges and limitations	A
118	ARS: display of authorization	A
119	ARS: surrender of authorization	A
124	CCMC: required certificate, ratings and qualifications	A

REG NO:	TITLE	PART
134	Aviation medical examiner submission of signed medical evaluation report	A
135	Issue of medical certificate	A
137	Medical confidentiality	A
142	Prohibition of medical certification	A
143	Medical requirements	A
152	Ear and related structures	A
154	Cardiovascular: general	A
155	Blood pressure and circulation	A
157	Neurological requirements	A
158	Respiratory capability	A
160	Vestibular apparatus	A
161	Bones, muscles and tendons	A
162	Endocrine system	B
163	Diabetic applicant	B
164	Gastrointestinal and digestive tract	A
165	Kidneys and urinary tract	A
172	Use of psychoactive substances	B
173	Drug and alcohol testing and reporting	B
174	Inspection of licences, certificates and authorizations	A
179	Use and retention of documents and records	A
180	Report of violation	A
181	Enforcement of directions	B

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