

AIR NAVIGATION ACT  
(CHAPTER 6, SECTION 3)

AIR NAVIGATION ORDER

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[1st July 1985]

PART I  
PRELIMINARY

**Citation**

1. This Order may be cited as the Air Navigation Order.

**Definitions**

- 2.—(1) In this Order, unless the context otherwise requires —

“2D instrument approach operation” means an instrument approach operation using lateral navigation guidance only;

*[S 21/2015 wef 26/01/2015]*

“3D instrument approach operation” means an instrument approach operation using both lateral and vertical navigation guidance;

*[S 21/2015 wef 26/01/2015]*

“accredited medical conclusion” means the conclusion reached by one or more medical experts acceptable to the Chief Executive for the purposes of the case concerned, in consultation with flight operations experts or other experts if necessary;

*[S 325/2000 wef 01/08/2000]*

*[S 423/2010 wef 02/08/2010]*

“advisory airspace” means an airspace of defined dimensions, or a designated route, within which air traffic advisory service is available;

“aerial work” means an aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, and aerial advertisement;

*[S 278/2010 wef 15/05/2010]*

“aerial work aircraft” means an aircraft (other than a public transport aircraft) flying, or intended by the operator to fly, for the purpose of aerial work;

“aerial work undertaking” means an undertaking whose business includes the performance of aerial work;

“aerobatic manoeuvres” includes loops, spins, rolls, bunts, stall turns, inverted flying and any other similar manoeuvre;

“aerodrome” means a defined area on land (including any building, installation and equipment) used or intended to be used, either wholly or in part, for the arrival, departure and surface movement of aircraft;

*[S 440/2003 wef 15/09/2003]*

“aerodrome certificate” means a certificate granted by the Chief Executive under paragraph 67 to a person to operate an aerodrome, subsequent to the acceptance of the aerodrome manual;

*[S 440/2003 wef 15/09/2003]*

*[S 423/2010 wef 02/08/2010]*

“aerodrome control service” means air traffic control service for aerodrome traffic;

*[S 325/2000 wef 01/08/2000]*

“aerodrome control tower” means a unit established to provide air traffic control service to aerodrome traffic;

*[S 325/2000 wef 01/08/2000]*

“aerodrome facility and equipment” means the facility and equipment, inside or outside the boundaries of an aerodrome, that is constructed, or installed, and maintained for the arrival, departure and surface movement of aircraft, and

“aerodrome facility, equipment” and “aerodrome facility or equipment” shall be construed accordingly;

*[S 440/2003 wef 15/09/2003]*

“aerodrome manual” means the manual forming part of the application for an aerodrome certificate under this Order and includes any amendments thereto made in accordance with this Order;

*[S 440/2003 wef 15/09/2003]*

“aerodrome operator”, in relation to a certified aerodrome, means the holder of an aerodrome certificate;

*[S 440/2003 wef 15/09/2003]*

“aerodrome traffic” means all traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome;

*[S 325/2000 wef 01/08/2000]*

“aerodrome traffic zone”, in relation to any aerodrome, means defined airspace, which is notified, around an aerodrome for the protection of aerodrome traffic;

“Aeronautical Information Circular” means a notice containing information which relates to flight safety, air navigation, technical, administrative or legislative matters;

*[S 440/2003 wef 15/09/2003]*

“Aeronautical Information Publication” means a publication issued by and with the authority of the Aeronautical Information Services provider and containing aeronautical information of a lasting character essential to air navigation;

*[S 440/2003 wef 15/09/2003]*

*[S 423/2010 wef 02/08/2010]*

“Aeronautical Information Services” means the services established within the defined area of coverage for the provision of aeronautical information and data necessary for the safety, regularity and efficiency of air navigation and, where appropriate, includes the personnel and facilities employed to provide information pertaining to the availability of air navigation services and their associated



procedures necessary for the safety, regularity and efficiency of air navigation;

*[S 440/2003 wef 15/09/2003]*

“aeronautical light” means any light established for the purpose of aiding air navigation;

*[Deleted by S 497/2019 wef 15/07/2019]*

“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;

*[S 581/2003 wef 12/12/2003]*

“AIP Amendment” means permanent changes to the information contained in the Aeronautical Information Publication;

*[S 440/2003 wef 15/09/2003]*

“AIP Supplement” means temporary changes, published by means of special pages, to the information contained in the Aeronautical Information Publication;

*[S 440/2003 wef 15/09/2003]*

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

*[S 61/93 wef 19/03/1993]*

“aircraft component” means —

- (a) an aircraft engine;
- (b) an aircraft propeller; or
- (c) any part or equipment of an aircraft, being a part or an equipment fitted to or provided in an aircraft, and includes an assembly of aircraft parts or equipment;

*[S 423/2010 wef 02/08/2010]*

“aircraft material” means a material (including a fluid) for use in the production, maintenance, servicing or operation of an

aircraft or of an aircraft component, but does not include an aircraft component;

*[S 331/2005 wef 02/06/2005]*

“aircraft type” means all aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics;

*[S 278/2010 wef 15/05/2010]*

“Airworthiness Notice” means an Airworthiness Notice issued under paragraph 7(12);

*[S 278/2010 wef 15/05/2010]*

“airworthy” means the status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation;

*[S 423/2010 wef 02/08/2010]*

*[Deleted by S 683/2018 wef 09/10/2018]*

“air traffic” means all aircraft in flight or operating on the manoeuvring area of an aerodrome;

*[S 325/2000 wef 01/08/2000]*

“air traffic advisory service” means a service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on flight plans in accordance with Instrument Flight Rules;

*[S 325/2000 wef 01/08/2000]*

“air traffic control clearance” means authorisation for an aircraft to proceed under conditions specified by an air traffic control unit;

*[S 325/2000 wef 01/08/2000]*

“air traffic control service” means a service provided in accordance with this Order for the purpose of —

(a) preventing any collision —

(i) between aircraft; and

(ii) between aircraft and any obstruction on the manoeuvring area; or

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

*[S 325/2000 wef 01/08/2000]*

“air traffic control unit” includes area control centre, approach control unit and aerodrome control tower;

*[S 325/2000 wef 01/08/2000]*

*[S 423/2010 wef 02/08/2010]*

“air traffic controller licence” means an air traffic controller licence granted or renewed under paragraph 62A(4);

*[S 325/2000 wef 01/08/2000]*

“air traffic service” includes flight information service, alerting service, air traffic advisory service, air traffic control service, area control service, approach control service and aerodrome control service;

*[S 325/2000 wef 01/08/2000]*

“air transport undertaking” means an undertaking whose business includes the carriage by air of passengers or cargo for hire or reward;

“alerting service” means a service provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and to assist such organisations as may be required;

*[S 325/2000 wef 01/08/2000]*

“alternate aerodrome” means an aerodrome to which an aircraft may proceed to when it becomes either impossible or inadvisable to proceed to, or to land at, the aerodrome of intended landing and which meets all of the following requirements:

(a) the necessary services and facilities are available;

(b) the aircraft performance requirements can be met;

(c) the aerodrome is operational at the expected time of use;

*[S 21/2015 wef 26/01/2015]*

“approach control service” means air traffic control service for arriving or departing controlled flights;

*[S 325/2000 wef 01/08/2000]*

“approach control unit” means a unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes;

*[S 423/2010 wef 02/08/2010]*

*[Deleted by S 497/2019 wef 15/07/2019]*

“appropriate ATS authority” means the relevant authority designated by the State responsible for providing air traffic services in the particular airspace concerned;

*[S 589/2016 wef 18/11/2016]*

“apron” means a defined area, on a land aerodrome, intended to accommodate aircraft for the purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance;

*[S 325/2000 wef 01/08/2000]*

“area control centre” means a unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction;

*[S 325/2000 wef 01/08/2000]*

“area control service” means air traffic control service for controlled flights in control areas;

*[S 325/2000 wef 01/08/2000]*

“ATS route” means a specified route designed by the appropriate ATS authority for channelling the flow of air traffic as necessary for the provision of air traffic services;

*[S 589/2016 wef 18/11/2016]*

“authorised person” means any person authorised by the Chief Executive either generally or in relation to a particular case or class of cases, and references to an authorised person include

references to the holder for the time being of any office designated by the Chief Executive;

*[S 423/2010 wef 02/08/2010]*

“basic instrument flight trainer” means a type of apparatus which is equipped with the appropriate instruments and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions;

*[S 278/2010 wef 15/05/2010]*

“beneficial interests” means interests arising under contract and other equitable interests;

“cabin crew member” means a member of the crew who performs, in the interest of the safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but does not include a flight crew member;

*[S 384/2000 wef 31/08/2000]*

*[S 423/2010 wef 02/08/2010]*

“captive balloon” means an unmanned, non-power driven balloon that is tethered to the surface of the earth, or to a stationary structure on the surface of the earth;

*[S 617/2012 wef 17/12/2012]*

“cargo” includes mail and animals;

“Certificate of Airworthiness” includes any validation thereof and any flight manual, performance schedule, or other document, whatever its title, incorporated by reference in that certificate relating to the Certificate of Airworthiness;

*[S 61/93 wef 19/03/1993]*

“certificate of maintenance review” means a certificate of maintenance review issued under paragraph 9;

“certificate of release to service” means a certificate that certifies —

- (a) that the part of the aircraft or its equipment has been overhauled, repaired, replaced, modified or maintained, as the case may be, in a manner and with material of a type approved by the Chief

Executive either generally or in relation to a class of aircraft or the particular aircraft and which identifies the overhaul, repair, replacement, modification or maintenance to which it relates and includes particulars of the work done; or

*[S 56/2003 wef 07/02/2003]*

*[S 278/2010 wef 15/05/2010]*

- (b) in relation to an inspection required by the Chief Executive, that the inspection has been made in accordance with the requirements of the Chief Executive and that any consequential repair, replacement or modification has been carried out;

*[S 56/2003 wef 07/02/2003]*

*[S 278/2010 wef 15/05/2010]*

“certificated for single pilot operation”, when used in relation to an aircraft, means that the aircraft is a type of aircraft which the Chief Executive has determined as being capable of being operated safely with a minimum crew of one pilot;

*[S 278/2010 wef 15/05/2010]*

“certified aerodrome” means an aerodrome whose operator has been granted an aerodrome certificate;

*[S 440/2003 wef 15/09/2003]*

“Chief Executive” means the Chief Executive of the Authority appointed under section 11 of the Civil Aviation Authority of Singapore Act 2009 (Act 17 of 2009), and includes any person authorised by him to act on his behalf and any person acting in that capacity;

*[S 278/2010 wef 15/05/2010]*

“competent authority” —

- (a) in relation to Singapore, means the Chief Executive; and
- (b) in relation to any other country, means the authority responsible under the law of that country for

exercising the safety regulatory oversight of civil aviation;

*[S 423/2010 wef 02/08/2010]*

“congested area”, in relation to a city, town or settlement, means any area which is substantially used for residential, industrial, commercial or recreational purposes;

“Contracting State” means any country (including Singapore) which is a party to the Chicago Convention;

“controlled airspace” means an airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification;

*[S 423/2010 wef 02/08/2010]*

“controlled flight” means any flight which is subject to an air traffic control clearance;

*[S 325/2000 wef 01/08/2000]*

“control area” means air space which has been notified as such and which extends upwards from a notified altitude;

“control zone” means any airspace which extends upwards from the surface of the earth to a specified upper limit as notified in the Aeronautical Information Publication;

*[S 487/2006 wef 11/08/2006]*

“co-pilot” means a pilot serving in any piloting capacity other than as pilot-in-command, but does not include a pilot who is on board an aircraft for the sole purpose of receiving flight instruction;

*[S 278/2010 wef 15/05/2010]*

“country” includes a territory;

“crew” means a member of the flight crew, a cabin crew member or a person carried on the aircraft who is appointed by the operator of the aircraft to give or to supervise the training, practice and periodical tests required in respect of the crew in regulations made under section 3A of the Act;

*[S 384/2000 wef 31/08/2000]*

*[S 683/2018 wef 09/10/2018]*

“danger area” means an airspace of defined dimensions which is declared by the Chief Executive as an area within which activities dangerous to the flight of aircraft may exist at specified times and is notified as such in the Aeronautical Information Publication or Notice to Airmen;

*[S 351/2015 wef 02/06/2015]*

“decision altitude” or “DA”, or “decision height” or “DH”, in relation to the operation of an aircraft at an aerodrome, means a specified altitude or height in a 3D instrument approach operation at which the pilot-in-command must initiate a missed approach if the visual reference to continue the approach has not been established;

*[S 21/2015 wef 26/01/2015]*

“designated medical examiner” means a person who —

- (a) is qualified and licensed to practise medicine in Singapore or elsewhere;
- (b) has received training in the practice of aviation medicine and has demonstrated adequate competency in aviation medicine;
- (c) possesses the practical knowledge and experience of the aviation environment; and
- (d) is approved by the Chief Executive to conduct a medical examination of and report on the fitness of an applicant for a licence or rating for which medical requirements are prescribed in the Fourteenth Schedule;

*[S 487/2006 wef 11/08/2006]*

*[S 423/2010 wef 02/08/2010]*

“destination alternate aerodrome” means an alternate aerodrome at which an aircraft would be able to land in the event that it becomes either impossible or inadvisable to land at the aerodrome of intended landing;

*[S 21/2015 wef 26/01/2015]*



“ELT” means an emergency locator transmitter which —

- (a) broadcasts distinctive signals on designated frequencies and, depending on application, may either operate automatically following a crash or be manually activated; and

*[S 384/2000 wef 31/08/2000]*

- (b) satisfies the requirements and operates in accordance with the provisions of Annex 10 to the Chicago Convention;

*[S 729/2010 wef 01/12/2010]*

“engine” means a unit which is used or intended to be used for aircraft propulsion and which consists of at least those components and equipment necessary for functioning and control, but excludes the propeller or rotors (if applicable);

*[S 423/2010 wef 02/08/2010]*

“en-route alternate aerodrome” means an alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en-route;

*[S 21/2015 wef 26/01/2015]*

“equivalent release document” means a document issued in accordance with the regulations of a foreign civil aviation authority and accepted by the Chief Executive as equivalent to a certificate of release to service;

*[S 56/2003 wef 07/02/2003]*

*[S 278/2010 wef 15/05/2010]*

*[Deleted by S 617/2012 wef 17/12/2012]*

“fireproof material” means a material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose;

*[S 570/2011 wef 04/10/2011]*

“flight” and “to fly” have the meanings respectively assigned to them by sub-paragraph (2);

“flight crew” means a crew member, including the pilot, flight engineer, flight navigator and flight radio operator, who is

charged with duties essential to the operation of an aircraft during a flight duty period;

*[S 278/2010 wef 15/05/2010]*

“flight despatcher” means a person designated by the operator of an aircraft to —

(a) engage in the control and supervision of flight operations while acting as a close link between the aircraft in flight and the ground services, and between the flight crew and the operator’s ground staff; and

(b) provide support, briefing or assistance to the pilot-in-command in the safe conduct of the flight, including pre-flight preparation for the despatch release,

and includes a flight operations officer;

*[S 423/2010 wef 02/08/2010]*

“flight information centre” means a unit established to provide flight information service and alerting service;

*[S 325/2000 wef 01/08/2000]*

“flight information service” means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights;

*[S 325/2000 wef 01/08/2000]*

“flight level” means a surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals;

*[S 423/2010 wef 02/08/2010]*

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

*[S 325/2000 wef 01/08/2000]*

“flight procedures trainer” means a type of apparatus which provides a realistic flight deck environment and which simulates instrument responses, simple control functions of the mechanical, electrical, electronic and other aircraft

systems and the performance and flight characteristics of aircraft of a particular class;

*[S 278/2010 wef 15/05/2010]*

“flight recorder” means any type of recorder installed in an aircraft for the purpose of complementing an investigation into an accident or incident;

*[S 729/2010 wef 01/12/2010]*

“flight simulation training device” means an apparatus in which flight conditions are simulated on the ground and includes a flight simulator, a flight procedures trainer and a basic instrument flight trainer;

*[S 278/2010 wef 15/05/2010]*

“flight simulator” means a type of apparatus that provides an accurate representation of a flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic and other aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that aircraft type are realistically simulated;

*[S 278/2010 wef 15/05/2010]*

“flight visibility” means the visibility forward from the flight deck of an aircraft in flight;

“free flight aerial object” means an unmanned, uncontrollable, lighter-than-air object that is able to remain airborne and includes a free balloon;

*[S 617/2012 wef 17/12/2012]*

“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;

*[S 278/2010 wef 15/05/2010]*

“gyroplane” means a heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors which rotate freely on substantially vertical axes;

*[S 570/2011 wef 04/10/2011]*

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

*[S 21/2015 wef 26/01/2015]*

“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 axes;

*[S 278/2010 wef 15/05/2010]*

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

*[S 278/2010 wef 15/05/2010]*

“instrument approach operation” means an approach and landing using instruments for navigation guidance based on an instrument approach procedure, executed either by a 2D or 3D instrument approach operation;

*[S 21/2015 wef 26/01/2015]*

“instrument approach procedure”, as classified in the Eleventh Schedule, means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from —

(a) the initial approach fix; or

(b) the beginning of a defined arrival route, where applicable,

to a point from which a landing can be completed and thereafter, if a landing is not completed, to a point at which holding or en-route obstacle clearance criteria apply;

*[S 21/2015 wef 26/01/2015]*

“Instrument Flight Rules” means Instrument Flight Rules contained in Part I of the Eleventh Schedule;

*[S 278/2010 wef 15/05/2010]*

“Instrument Meteorological Conditions” means meteorological conditions expressed in terms of visibility, distance from

cloud and ceiling, less than the minima specified for visual meteorological conditions;

*[S 423/2010 wef 02/08/2010]*

*[Deleted by S 617/2012 wef 17/12/2012]*

“kite” means a pilotless framework covered with a material including cloth, synthetic fibre, plastic or paper and which is designed to be flown in the wind at the end of a string without mechanical propulsion;

*[S 617/2012 wef 17/12/2012]*

“legal personal representative” means an executor, administrator or other representative of a deceased person;

“licence” includes any certificate of competency or certificate of validity issued with the licence or required to be held in connection with the licence by the law of the country in which the licence is granted;

“lifejacket” includes any device designed to support a person individually in or on water;

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

*[S 570/2011 wef 04/10/2011]*

“log book”, in the case of an aircraft log book, engine log book or variable pitch propeller log book includes a record kept either in a book or by any other means approved by the Chief Executive in any particular case;

*[S 278/2010 wef 15/05/2010]*

“maintenance” means the performance of tasks required to ensure the continued airworthiness of an aircraft, including any one, or combination, of the following:

- (a) overhaul;
- (b) inspection;
- (c) replacement;
- (d) defect rectification;

(e) the embodiment of a modification or repair;

*[S 278/2010 wef 15/05/2010]*

“maintenance schedule” means a document which describes the specific scheduled maintenance tasks and their frequency of completion necessary for the safe operation of those aircraft to which it applies;

*[S 278/2010 wef 15/05/2010]*

“manoeuvring area” means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, but does not include aprons;

*[S 325/2000 wef 01/08/2000]*

“Manual of Aerodrome Standards” means the Manual of Aerodrome Standards published by the Chief Executive under paragraph 67B;

*[S 440/2003 wef 15/09/2003]*

*[S 423/2010 wef 02/08/2010]*

“maximum total weight authorised”, in relation to an aircraft, means the maximum total weight of the aircraft and its contents at which the aircraft may take off anywhere in the world in the most favourable circumstances in accordance with the Certificate of Airworthiness in force in respect of the aircraft;

“medical assessor” means a person who —

- (a) is qualified and licensed to practise medicine in Singapore or elsewhere;
- (b) is trained and experienced in the practice of aviation medicine;
- (c) possesses the practical knowledge and experience of the conditions in which the holder of a licence carries out the functions to which his licence relates; and
- (d) is approved by the Chief Executive to assess the medical fitness of an applicant under the Fourteenth Schedule based on evaluating the report of the designated medical examiner and such other

assessments as the medical assessor may deem necessary;

*[S 617/2012 wef 17/12/2012]*

“military aircraft” includes the naval, military or air force aircraft of any country;

“minimum descent altitude” or “MDA”, or “minimum descent height” or “MDH”, means a specified altitude or height in a 2D instrument approach operation or circling approach operation below which the pilot-in-command must not continue the descent without the required visual reference;

*[S 21/2015 wef 26/01/2015]*

“modification”, in relation to an aircraft or aircraft component, means the alteration of the aircraft or aircraft component to conform to the approved standard for that aircraft or aircraft component as notified in the Singapore Airworthiness Requirements (SAR), and “modified” shall be construed accordingly;

*[S 423/2010 wef 02/08/2010]*

*[S 729/2010 wef 01/12/2010]*

“movement area” means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the aprons;

*[S 440/2003 wef 15/09/2003]*

“nautical mile” means the International Nautical Mile which is a distance of 1,852 metres;

“navigation specification” means a set of requirements pertaining to the aircraft and flight crew that is needed to support performance-based navigation within a defined airspace;

*[S 589/2016 wef 18/11/2016]*

“night” means the time between 20 minutes after sunset and 20 minutes before sunrise, sunset and sunrise being determined at surface level;

“Notam” or “Notice to Airmen” means a notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service or procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations;

*[S 440/2003 wef 15/09/2003]*

“notified” means —

(a) shown in any official publications issued by the Chief Executive for the purpose of enabling any of the provisions of this Order to be complied with, such as but not limited to —

(i) Advisory Circulars (AC);

(ii) Airworthiness Notices;

(iii) *[Deleted by S 683/2018 wef 09/10/2018]*

(iv) Manual of Aerodrome Standards (MOAS);

(v) Manual of Standards — Licensing of Air Traffic Control Personnel (MOS-PEL);

(vi) Manual of Standards — Units of Measurement to be used in Air and Ground Operations (MOS-UOM);

(vii) Singapore Air Safety Publications (SASP); or

*[S 497/2019 wef 15/07/2019]*

(viii) Singapore Airworthiness Requirements (SAR);  
or

(ix) *[Deleted by S 497/2019 wef 15/07/2019]*

(b) shown in any publications issued by the Aeronautical Information Services provider such as but not limited to —

(i) Aeronautical Information Circulars (AIC);

(ii) Aeronautical Information Publications (AIP);

or



## (iii) Notams (Notices to Airmen);

[S 423/2010 wef 02/08/2010]

“obstacle” means any fixed (whether temporary or permanent) or mobile object or part thereof —

- (a) which is located in an area intended for the surface movement of aircraft; or
- (b) which extends above a defined surface intended to protect aircraft in flight;

[S 440/2003 wef 15/09/2003]

“obstacle limitation surfaces” means a series of surfaces that define the volume of airspace at and around an aerodrome to be kept free of obstacles in order to permit the intended aircraft operations to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome;

[S 440/2003 wef 15/09/2003]

“operator” has the meaning assigned to it by sub-paragraph (3);

“overhaul”, in relation to an aircraft component, means a process that ensures that the aircraft component is in complete conformity with all the applicable service tolerances specified in the type certificate holder’s or aircraft component manufacturer’s instructions for continued airworthiness, or in data which is approved or accepted by the competent authority and includes at least the disassembly, cleaning, inspection, necessary repairs, reassembly and testing of the aircraft component in accordance with such specified data;

[S 423/2010 wef 02/08/2010]

“parasail” means a structure that is capable of lifting a person harnessed or attached to the structure up or through the air when the structure is —

- (a) towed by a moving vessel, vehicle or such other object; or
- (b) thrust into the air by the wind,

and “parasailing” shall be construed accordingly;

*[S 617/2012 wef 17/12/2012]*

“performance-based communication” or “PBC” means communication based on performance specifications applied to the provision of air traffic services;

*[S 589/2016 wef 18/11/2016]*

“performance-based navigation” or “PBN” means area navigation based on performance requirements for aircraft operating along an ATS route or in a designated airspace, or for an instrument approach procedure;

*[S 589/2016 wef 18/11/2016]*

“performance-based surveillance” or “PBS” means surveillance based on performance specifications applied to the provision of air traffic services;

*[S 589/2016 wef 18/11/2016]*

“pilot-in-command” 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;

*[S 423/2010 wef 02/08/2010]*

“Pre-flight Information Bulletin” means a presentation of current Notam information of operational significance, prepared prior to flight;

*[S 440/2003 wef 15/09/2003]*

“pressurised aircraft” means an aircraft provided with means of maintaining in any compartment thereof a pressure greater than that of the surrounding atmosphere;

“problematic use of psychoactive substances” means the use of one or more psychoactive substances in a way that —

- (a) constitutes a direct hazard to the user or endangers the lives, health or welfare of any other person; or
- (b) causes or worsens an occupational, social, mental or physical problem or disorder suffered by the user;

*[S 325/2000 wef 01/08/2000]*

“production” means the performance of tasks required for the manufacture or assembly of aircraft, aircraft components, aircraft materials or part thereof;

*[S 331/2005 wef 02/06/2005]*

“prohibited area” means an airspace of defined dimensions which is declared by the Chief Executive as an area above any land or territorial waters of Singapore within which the flight of aircraft is prohibited and is notified as such in the Aeronautical Information Publication or Notice to Airmen;

*[S 351/2015 wef 02/06/2015]*

“psychoactive substances” means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens and volatile solvents, but excludes coffee and tobacco;

*[S 325/2000 wef 01/08/2000]*

“public transport” has the meaning assigned to it by sub-paragraph (4);

“public transport aircraft” means an aircraft flying or intended by the operator of the aircraft to fly, for the purpose of public transport;

“public transport of passengers” means transport of passengers which is public transport by virtue of sub-paragraph (4)(a)(i) or (ii);

“rating”, in relation to a licence issued under paragraph 11, 20 or 62A, means an authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence;

*[S 278/2010 wef 15/05/2010]*

“repair” means the restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate of the respective aircraft type, after it has been damaged or subject to wear;

*[S 166/2002 wef 15/04/2002]*

“replacement”, in relation to any part of any aircraft or its equipment, includes the removal and replacement of that part whether or not by the same part, and whether or not any work is done on it, but does not include the removal and replacement of a part which is designed to be removable solely for the purpose of enabling another part to be inspected, repaired, removed or replaced or cargo to be loaded;

“required communication performance specification” or “RCP specification” means a set of requirements for the provision of air traffic services and associated ground equipment, aircraft capability, and operations, that is needed to support performance-based communication;

*[S 589/2016 wef 18/11/2016]*

“required navigation performance” or “RNP” means a statement of the navigation performance necessary for operation within a defined airspace;

*[S 581/2003 wef 12/12/2003]*

“required surveillance performance specification” or “RSP specification” means a set of requirements for the provision of air traffic services and associated ground equipment, aircraft capability, and operations, that is needed to support performance-based surveillance;

*[S 589/2016 wef 18/11/2016]*

“restricted area” means an airspace of defined dimensions which is declared by the Chief Executive as an area above any land or territorial waters of Singapore within which the flight of aircraft is restricted in accordance with certain specified conditions and is notified as such in the Aeronautical Information Publication or Notice to Airmen;

*[S 351/2015 wef 02/06/2015]*

*[Deleted by S 589/2016 wef 18/11/2016]*

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

*[S 570/2011 wef 04/10/2011]*

“Rules of the Air” means the Rules of the Air contained in the Eleventh Schedule;

*[S 278/2010 wef 15/05/2010]*

“runway strip” means a defined area, including the runway and stopway if provided, that is intended —

(a) to reduce the risk of damage to aircraft running off a runway; and

(b) to protect aircraft flying over the area during take-off or landing operations;

*[S 440/2003 wef 15/09/2003]*

“scheduled journey” means one of a series of journeys which are undertaken between the same two places and together amount to a systematic service;

“Singapore Air Safety Publication (SASP)” means the Singapore Air Safety Publication issued under paragraph 20;

*[S 384/2000 wef 31/08/2000]*

“Singapore aircraft” means an aircraft which is registered in the Republic of Singapore;

“Singapore Airworthiness Requirements (SAR)” means the Singapore Airworthiness Requirements issued under paragraph 17A;

*[S 384/2000 wef 31/08/2000]*

“special VFR flight” means a flight which is a special VFR flight for the purposes of the rules prescribed under paragraph 62(1);

“State of registry” means the State on whose register the aircraft is entered;

*[S 423/2010 wef 02/08/2010]*

“State of the operator” means the State in which the operator of an aircraft has his principal place of business or, if he has no such place of business, his permanent residence;

*[S 384/2000 wef 31/08/2000]*

“survival ELT” means an ELT which is removable from an aircraft, stowed as to facilitate its ready use in an emergency, and capable of being manually activated;

*[S 384/2000 wef 31/08/2000]*

“take-off alternate aerodrome” means an alternate aerodrome at which an aircraft would be able to land if landing becomes necessary shortly after take-off and it is not possible to use the aerodrome of departure;

*[S 21/2015 wef 26/01/2015]*

“taxiing” means the movement of an aircraft on the surface of an aerodrome under its own power, but does not include take-off and landing;

*[S 325/2000 wef 01/08/2000]*

“to land” in relation to an aircraft includes to alight on water;

*[S 617/2012 wef 17/12/2012]*

“Visual Flight Rules” means the Visual Flight Rules contained in Part I of the Eleventh Schedule;

*[S 278/2010 wef 15/05/2010]*

“Visual Meteorological Conditions (VMC)” means meteorological conditions expressed in terms of visibility, distance from cloud and ceiling, equal to or better than specified minima;

*[S 423/2010 wef 02/08/2010]*

“working day” means any day except a Saturday, Sunday or public holiday.

*[S 617/2012 wef 17/12/2012]*

(2) An aircraft shall be deemed to be in flight —

(a) in the case of an aeroplane, a pilotless flying machine or glider (whether being towed or not), from the moment it first moves for the purpose of taking off until the moment

when it finally comes to rest after landing at the end of the flight;

- (b) in the case of a helicopter or gyroplane, from the moment its rotor blades start turning until the moment when it finally comes to rest after landing at the end of the flight, and the rotor blades are stopped;
- (c) in the case of an airship or free balloon, from the moment when it first becomes detached from the surface until the moment when it next becomes attached thereto or comes to rest thereon,

and the expressions “a flight”, “to fly” and “flight time” shall be construed accordingly.

*[S 278/2010 wef 15/05/2010]*

(3) For the purposes of the application of any provision of this Order in relation to any particular aircraft, “operator” means the person who, or organisation or enterprise which, at the relevant time is engaged in or offering to engage in an aircraft operation, except in the following cases:

- (a) where there is an agreement for the charter, hire, lease or loan of an aircraft by one person (the first-mentioned person) to another person, other than an air transport undertaking or an aerial work undertaking for a period not exceeding 14 days, the first-mentioned person shall be deemed to be the operator for the purposes of the application of any provision in Part III;
- (b) where the aircraft, being a Singapore aircraft, is used in any general aviation operation, the owner of the aircraft shall be deemed to be the operator of that aircraft unless the owner has informed the Chief Executive in a manner specified by the Chief Executive that he is not the person who is engaged in that operation; and
- (c) where the aircraft is not used in any aircraft operation, the person who owns or whose management or control the aircraft is in shall be deemed to be the operator.

*[S 423/2010 wef 02/08/2010]*

(4)(a) Subject to this paragraph, an aircraft in flight shall for the purposes of this Order be deemed to fly for the purpose of public transport —

- (i) if hire or reward is given or promised for the carriage of passengers or cargo in the aircraft on that flight; or
- (ii) if any passengers or cargo are carried gratuitously in the aircraft on that flight by an air transport undertaking, not being persons in the employment of the undertaking (including its directors in the case of a body corporate), persons with the authority of the Chief Executive either making any inspection or witnessing any training, practice or test for the purposes of this Order, or a cargo intended to be used by any such passengers as aforesaid, or by the undertaking; or

*[S 423/2010 wef 02/08/2010]*

- (iii) for the purposes of Part III if hire or reward is given or promised for the right to fly the aircraft on that flight otherwise than under a hire purchase agreement.

(b) Where under a transaction effected by or on behalf of a member of an unincorporated association of persons on the one hand and the association of persons or any member thereof on the other hand, a person is carried in, or is given the right to fly, an aircraft in such circumstances that hire or reward would be deemed to be given or promised if the transaction were effected otherwise than as aforesaid, hire or reward, shall, for the purposes of this Order, be deemed to be given.

(5) The expressions appearing in the “Table of General Classification of Aircraft” set out in Part A of the First Schedule shall have the meanings thereby assigned to them.

(6) For the purpose of paragraph 19(2)(a), the reference to law of the State of the operator shall apply where —

- (a) that aircraft is registered in a Contracting State other than the State of the operator;



- (b) the operator is operating that aircraft pursuant to an agreement for its lease, charter or interchange or any similar arrangement;
- (c) the State in which that aircraft is registered has, by agreement with the State of the operator, agreed to transfer to the State of the operator its functions and duties as State of registry in respect of that aircraft in relation to any one or more of the following matters:
  - (i) [*Deleted by S 683/2018 wef 09/10/2018*]
  - (ii) [*Deleted by S 683/2018 wef 09/10/2018*]
  - (iii) in the case of paragraph 19(2)(a), flight crew licensing; or
  - (iv) [*Deleted by S 683/2018 wef 09/10/2018*]
- (d) the agreement has been registered with the Council of the International Civil Aviation Organisation or the existence and scope of the agreement have been directly communicated to the Authority.

[S 384/2000 wef 31/08/2000]

(7) For the purposes of paragraphs 67(4)(e), 67F and 67G(1) and the Eighteenth Schedule, “safety management system” means a system for the management of safety at aerodromes, including the organisational structure, responsibilities, procedures, processes and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for the control of safety at, and the safe use of, the aerodrome.

[S 440/2003 wef 15/09/2003]

(8) In this Order, any reference to acting as an air traffic controller shall be read as providing or supervising the provision of aerodrome control service, approach control service or area control service.

[S 423/2010 wef 02/08/2010]

(9) In this Order, for every standard where a value is prescribed in the International System of Units (SI) and an alternative value is prescribed in a non-SI alternative unit of measurement in parentheses,

the relevant standard is to be regarded as reached when either value is obtained.

[S 21/2015 wef 26/01/2015]

## PART II

### REGISTRATION AND MARKING OF AIRCRAFT

#### **Aircraft to be registered**

3.—(1) An aircraft shall not fly in Singapore unless it is registered in —

- (a) Singapore; or
- (b) a Contracting State; or
- (c) some other State in relation to which there is in force an agreement between the Government and the government of that State which makes provision for the flight in Singapore of aircraft registered in that State:

Provided that —

- (i) any aircraft may fly unregistered on any flight which —
  - (a) begins and ends in Singapore without passing over any other State;
  - (b) is in accordance with the “B Conditions” set out in the Second Schedule; and
  - (c) is in accordance with the conditions of a permit to fly issued by the Chief Executive in respect of that aircraft;

[S 278/2010 wef 15/05/2010]

- (ii) this paragraph shall not apply to any kite or captive balloon.

[S 8/94 wef 15/01/1994]

(2) The Chief Executive may, in such special circumstances and subject to such conditions or limitations as he may think fit, exempt temporarily from sub-paragraph (1) an aircraft registered elsewhere.

[S 278/2010 wef 15/05/2010]

(3) If an aircraft flies in Singapore in contravention of sub-paragraph (1) in such manner or circumstances that if the aircraft had been registered in Singapore an offence against this Order or against other subsidiary legislation made under the Act would have been committed, the like offence shall be deemed to have been committed in respect of that aircraft.

### **Registration of aircraft in Singapore**

**4.—(1)** The Chief Executive shall be the authority for the registration of aircraft in Singapore.

*[S 278/2010 wef 15/05/2010]*

(2) Subject to this paragraph, an aircraft shall not be registered or continue to be registered in Singapore if it appears to the Chief Executive that —

- (a) the aircraft is registered outside Singapore and that such registration does not cease by operation of law upon the aircraft being registered in Singapore;
- (b) an unqualified person is entitled as owner to any legal or beneficial interest in the aircraft or any share therein; or
- (c) it would be inexpedient in the public interest for the aircraft to be or to continue to be registered in Singapore.

*[S 278/2010 wef 15/05/2010]*

(3) The following persons and no other shall be qualified to be the owner of a legal or beneficial interest in an aircraft registered in Singapore or a share therein:

- (a) the Government;
- (b) citizens of Singapore;
- (c) citizens of any Commonwealth country; and
- (d) bodies incorporated in Singapore or in some part of the Commonwealth and having their principal place of business in some part of the Commonwealth.

(4) If an unqualified person residing or having a place of business in Singapore is entitled as owner to a legal or beneficial interest in an aircraft, or a share therein, the Chief Executive, upon being satisfied

that the aircraft may otherwise be properly so registered, may register the aircraft in Singapore. The person aforesaid shall not cause or permit the aircraft, while it is registered in pursuance of this sub-paragraph, to be used for the purpose of public transport or aerial work.

*[S 278/2010 wef 15/05/2010]*

(5) If an aircraft is chartered by demise to a person qualified as aforesaid the Chief Executive may, whether or not an unqualified person is entitled as owner to a legal or beneficial interest therein, register the aircraft in Singapore in the name of the charterer upon being satisfied that the aircraft may otherwise be properly so registered, and subject to this paragraph the aircraft may remain so registered during the continuation of the charter.

*[S 278/2010 wef 15/05/2010]*

(6) Application for the registration of an aircraft in Singapore shall be made in writing to the Chief Executive, and shall include or be accompanied by such particulars and evidence relating to the aircraft and the ownership and chartering thereof as he may require to enable him to determine whether the aircraft may properly be registered in Singapore and to issue the certificate referred to in sub-paragraph (8). In particular, the application shall include the proper description of the aircraft according to column 4 of the “Table of General Classification of Aircraft” set out in Part A of the First Schedule.

*[S 278/2010 wef 15/05/2010]*

(7) Upon receiving an application for the registration of an aircraft in Singapore and being satisfied that the aircraft may properly be so registered, the Chief Executive shall register the aircraft, wherever it may be, and shall include in the register the following particulars:

- (a) the number of the certificate;
- (b) the nationality mark of the aircraft, and the registration mark assigned to it by the Chief Executive;
- (c) the name of the constructor of the aircraft and its designation;
- (d) the serial number of the aircraft;

- (e) (i) the name and address of every person who is entitled as owner to a legal interest in the aircraft or a share therein and in the case of an aircraft which is the subject of a hire-purchase agreement the name and address of the hirer; or
- (ii) in the case of an aircraft registered in pursuance of sub-paragraph (4) or (5) an indication that it is so registered.

*[S 278/2010 wef 15/05/2010]*

(8) The Chief Executive shall furnish to the person or persons in whose name the aircraft is registered (referred to in this Order as the registered owner) a certificate of registration, which shall include the foregoing particulars and the date on which the certificate was issued:

Provided that the Chief Executive shall not be required to furnish a certificate of registration if the registered owner —

- (a) is the holder of an aircraft dealer's certificate granted under sub-paragraph (9);
- (b) has made to the Chief Executive and has not withdrawn a statement of his intention that the aircraft is to fly only in accordance with the "C Conditions" set out in the Second Schedule; and

*[S 278/2010 wef 15/05/2010]*

- (c) shall use the aircraft only in accordance with the "C Conditions" set out in the Second Schedule.

*[S 278/2010 wef 15/05/2010]*

(9) The Chief Executive may grant to any person an aircraft dealer's certificate if he is satisfied that he is a person carrying on in Singapore the business of buying and selling aircraft.

*[S 278/2010 wef 15/05/2010]*

(10) Subject to sub-paragraphs (4) and (5), if at any time after an aircraft has been registered in Singapore an unqualified person becomes entitled as owner to a legal or beneficial interest in the aircraft or a share therein, the registration of the aircraft shall thereupon become void and the certificate of registration shall

forthwith be returned by the registered owner to the Chief Executive for cancellation.

*[S 278/2010 wef 15/05/2010]*

(11) Any person who is registered as the owner of an aircraft registered in Singapore shall forthwith inform the Chief Executive in writing of —

- (a) any change in the particulars which were furnished to the Chief Executive upon application being made for the registration of the aircraft;
- (b) the destruction of the aircraft, or its permanent withdrawal from use; or
- (c) in the case of an aircraft registered in pursuance of sub-paragraph (5) the termination of the demise charter.

*[S 278/2010 wef 15/05/2010]*

(12) Any person who becomes the owner of an aircraft registered in Singapore shall forthwith inform the Chief Executive in writing to that effect.

*[S 278/2010 wef 15/05/2010]*

(13) The Chief Executive may, whenever it appears necessary or appropriate to do so for giving effect to this Part or for bringing up to date or otherwise correcting the particulars entered in the register, amend the register or, if he thinks fit, may cancel the registration of the aircraft, and shall cancel that registration if he is satisfied that there has been a change in the ownership of the aircraft.

*[S 278/2010 wef 15/05/2010]*

(14) The Chief Executive may, by regulations, adapt or modify sub-paragraphs (1) to (13) as he considers necessary or expedient for the purpose of providing for the temporary transfer of aircraft to or from the Singapore register, either generally or in relation to a particular case or class of cases.

*[S 278/2010 wef 15/05/2010]*

(15) In this paragraph references to an interest in an aircraft do not include references to an interest in an aircraft to which a person is entitled only by virtue of his membership of a flying club, and the

reference in sub-paragraph (11) to the registered owner of an aircraft includes, in the case of a deceased person, his personal representative, and in the case of a body corporate which has been dissolved, its successor.

(16) Nothing in this paragraph shall require the Chief Executive to cancel the registration of an aircraft if in his opinion it would be inexpedient in the public interest to do so.

*[S 278/2010 wef 15/05/2010]*

### **Nationality and registration marks**

**5.—(1)** An aircraft (other than an aircraft permitted by or under this Order to fly without being registered) shall not fly unless it bears painted thereon or affixed thereto, in the manner required by the law of the country in which it is registered, the nationality and registration marks required by that law.

(2) The marks to be borne by aircraft registered in Singapore shall comply with Part B of the First Schedule.

(3) An aircraft shall not bear any marks which purport to indicate —

(a) that the aircraft is registered in a country in which it is not in fact registered except that marks approved by the Chief Executive for the purposes of flight in accordance with the “B Conditions” set out in the Second Schedule shall be deemed not to indicate that the aircraft is so registered; or

*[S 61/93 wef 19/03/1993]*

*[S 278/2010 wef 15/05/2010]*

(b) that the aircraft is a State aircraft of a particular country if it is not in fact such an aircraft, unless the appropriate authority of that country has sanctioned the bearing of such marks.

## **PART III**

### **AIRWORTHINESS AND EQUIPMENT OF AIRCRAFT**

**6.** *[Deleted by S 683/2018 wef 09/10/2018]*

**Issue and renewal of Certificates of Airworthiness**

7.—(1) The Chief Executive may issue in respect of any aircraft a Certificate of Airworthiness if he is satisfied that the aircraft is fit to fly having regard to —

(a) the design, construction, workmanship and materials of the aircraft (including in particular any engines fitted therein), and of any equipment carried in the aircraft which he considers necessary for the airworthiness of the aircraft;

*[S 278/2010 wef 15/05/2010]*

(b) the results of flying trials, and such other tests of the aircraft as he may require; and

*[S 278/2010 wef 15/05/2010]*

(c) its compliance with the requirements contained in all Airworthiness Notices:

*[S 278/2010 wef 15/05/2010]*

Provided that, if the Chief Executive has issued a Certificate of Airworthiness in respect of an aircraft which, in his opinion, is a prototype aircraft or a modification of a prototype aircraft, he may dispense with flying trials in the case of any other aircraft if he is satisfied that it conforms to such prototype or modification.

*[S 278/2010 wef 15/05/2010]*

(2) Every Certificate of Airworthiness shall specify such categories as are, in the opinion of the Chief Executive, appropriate to the aircraft in accordance with the Third Schedule and the certificate shall be issued subject to the condition that the aircraft shall be flown only for the purpose indicated in the said Schedule in relation to those categories.

*[S 278/2010 wef 15/05/2010]*

(3) *[Deleted by S 61/93 wef 19/03/1993]*

(4) Where an aircraft is classified in its Certificate of Airworthiness as being under the Special Category, the purpose for which the aircraft is used shall also be specified in its Certificate of Airworthiness.

*[S 61/93 wef 19/03/1993]*



(5) The Chief Executive may issue the Certificate of Airworthiness subject to such other conditions relating to the airworthiness of the aircraft as he thinks fit.

*[S 278/2010 wef 15/05/2010]*

(6) *[Deleted by S 683/2018 wef 09/10/2018]*

(7) The Chief Executive may, subject to such conditions as he thinks fit, issue a certificate of validation rendering valid for the purposes of this Order a Certificate of Airworthiness issued in respect of any aircraft under the law of any country other than Singapore.

*[S 278/2010 wef 15/05/2010]*

(8) Subject to this paragraph, a Certificate of Airworthiness or validation issued under this paragraph shall remain in force for such period as may be specified therein, and may be renewed from time to time by the Chief Executive for such further period as he thinks fit.

*[S 278/2010 wef 15/05/2010]*

*[S 683/2018 wef 09/10/2018]*

(9) A Certificate of Airworthiness or a certificate of validation issued in respect of an aircraft shall cease to be in force —

(a) if the aircraft, or such of its equipment as is necessary for the airworthiness of the aircraft is overhauled, repaired or modified, or if any part of the aircraft or of such equipment is removed or is replaced, otherwise than in a manner and with material of a type approved by the Chief Executive either generally or in relation to a class of aircraft or to the particular aircraft;

*[S 278/2010 wef 15/05/2010]*

(b) from the time an inspection is required by the Chief Executive to be made for the purpose of ascertaining whether the aircraft remains airworthy until the completion of that inspection of the aircraft or of any such equipment;

*[S 278/2010 wef 15/05/2010]*

(c) from the time a modification is required by the Chief Executive for the purpose of ensuring that the aircraft remains airworthy until the completion to the satisfaction

of the Chief Executive of that modification of the aircraft or of any such equipment; or

*[S 278/2010 wef 15/05/2010]*

- (d) if the aircraft, or such of its equipment as is necessary for the airworthiness of the aircraft, is not in compliance with the requirements contained in all Airworthiness Notices.

*[S 278/2010 wef 15/05/2010]*

(10) The Chief Executive shall not be required by reason of this Order to accept an application for the issue of a Certificate of Airworthiness or a certificate of validation or for the variation or renewal of any such certificate when the application is not supported by reports from such approved persons as the Chief Executive may specify (either generally or in a particular case or class of cases).

*[S 61/93 wef 19/03/1993]*

*[S 278/2010 wef 15/05/2010]*

(11) The Chief Executive shall cause to be prepared and preserved in relation to each Singapore aircraft a record enabling the aircraft (including in particular its engines) and such of its equipment as he may have considered necessary for the airworthiness of the aircraft in issuing, varying or rendering valid a Certificate of Airworthiness, to be identified with the drawings and other documents on the basis of which the certificate was issued, varied or rendered valid as the case may be. All equipment so identified shall for the purpose of this Order be deemed to be equipment necessary for the airworthiness of the aircraft. The Chief Executive shall cause such record to be produced for examination upon request being made therefor at any reasonable time by any person having, in the opinion of the Chief Executive, reasonable grounds for requiring to examine it.

*[S 278/2010 wef 15/05/2010]*

(12) The Chief Executive may, from time to time, issue an Airworthiness Notice stipulating the requirements that must be complied with in relation to the airworthiness of any aircraft or type of aircraft.

*[S 278/2010 wef 15/05/2010]*

(13) Subject to sub-paragraph (14), any applicant for and any holder of a Certificate of Airworthiness issued under this paragraph

shall comply with any Airworthiness Notice issued by the Chief Executive under this paragraph.

*[S 278/2010 wef 15/05/2010]*

(14) The Chief Executive may, either generally or for such time as he may specify, waive the application of any Airworthiness Notice, or part thereof, issued under this paragraph, to any person referred to in sub-paragraph (13).

*[S 278/2010 wef 15/05/2010]*

### **Export Certificate of Airworthiness**

**7A.**—(1) Where a Singapore registered aircraft is to be registered in another State (called in this paragraph the prospective State of Registry), the Chief Executive may issue an Export Certificate of Airworthiness in respect of the aircraft if —

- (a) that prospective State of Registry requires an Export Certificate of Airworthiness to register the aircraft; and
- (b) the aircraft meets the requirements under paragraph 7(1) for a Certificate of Airworthiness.

(2) An Export Certificate of Airworthiness for an aircraft is not a Certificate of Airworthiness for the purpose of this Order and does not authorise the operation of the aircraft.

(3) An Export Certificate of Airworthiness for an aircraft ceases to have effect when the aircraft is registered in the prospective State of Registry.

*[S 181/2016 wef 01/05/2016]*

### **Approval or certificate for design, production or distribution of aircraft, aircraft components or aircraft materials**

**8.**—(1) No person shall engage in any stage of design, production or distribution of —

- (a) Singapore aircraft;
- (b) aircraft components fitted or to be fitted to or provided or to be provided in a Singapore aircraft; or

- (c) aircraft materials for use in the production, maintenance, servicing or operation of a Singapore aircraft or an aircraft component of a Singapore aircraft,

unless he has obtained from the Authority a certificate or other form of written approval in respect of the design, production or distribution of the aircraft, aircraft component or aircraft material, or the Authority determines that no certificate or approval is required, either generally or in a particular case.

*[S 331/2005 wef 02/06/2005]*

*[S 278/2010 wef 15/05/2010]*

*[S 616/2017 wef 31/10/2017]*

(2) Any person engaged or intending to engage in any stage of design, production or distribution of any other aircraft, aircraft component or aircraft material may apply to the Authority for a certificate or other form of written approval in respect of the design, production or distribution of that other aircraft, aircraft component or aircraft material.

*[S 331/2005 wef 02/06/2005]*

*[S 278/2010 wef 15/05/2010]*

*[S 616/2017 wef 31/10/2017]*

(3) The Authority may, subject to such conditions as the Authority thinks fit, issue a certificate or other form of written approval under this paragraph to an applicant who has —

- (a) made his application in such form and manner and provided such information as may be specified in the Singapore Airworthiness Requirements (SAR);

*[S 729/2010 wef 01/12/2010]*

- (b) furnished such other information as the Authority may require; and

*[S 278/2010 wef 15/05/2010]*

- (c) satisfied the Authority that —

- (i) he is, or will be, able to carry out the design, production or distribution to which the application relates in a satisfactory manner; and

- (ii) where the application relates to design, the design complies with the appropriate airworthiness requirements specified in the Singapore Airworthiness Requirements (SAR).

*[S 331/2005 wef 02/06/2005]*

*[S 278/2010 wef 15/05/2010]*

*[S 729/2010 wef 01/12/2010]*

*[S 616/2017 wef 31/10/2017]*

(4) An authorised person may, at any time, for the purpose of ascertaining whether the design, production or distribution to which an application, a certificate or an approval relates is being, or will be, carried on in a satisfactory manner or for any other purpose —

- (a) inspect any aircraft, aircraft component or aircraft material;
- (b) inspect any process or system carried on by, any record maintained by or any document in the possession of, the applicant or holder of the certificate or approval in connection with the activities to which the certificate or approval relates;
- (c) conduct any test or evaluation that the authorised person considers necessary; and
- (d) require the applicant or holder of the certificate or approval to furnish to the authorised person such evidence as the authorised person may require of —
- (i) the qualifications and competence of the applicant or holder or of the employees of the applicant or holder;
- (ii) the facilities, including suppliers' facilities, at the disposal of the applicant or holder; or
- (iii) design data, documents or reports in connection with the activities to which the certificate or approval relates.

*[S 331/2005 wef 02/06/2005]*

(5) *[Deleted by S 616/2017 wef 31/10/2017]*

(6) The holder of a certificate or an approval under this paragraph shall, at all times, comply with the conditions contained in such certificate or approval.

*[S 331/2005 wef 02/06/2005]*

**Certificate or other approval for maintenance of Singapore registered aircraft or aircraft components**

**8A.—(1)** A person must not engage in the maintenance of —

- (a) a Singapore registered aircraft; or
- (b) an aircraft component fitted or to be fitted to a Singapore registered aircraft,

unless the person has a certificate or other form of written approval from the Authority authorising the person to do so.

*[S 278/2010 wef 15/05/2010]*

*[S 181/2016 wef 01/05/2016]*

*[S 616/2017 wef 31/10/2017]*

(2) The Authority may, subject to such conditions as the Authority thinks fit, issue a certificate or other form of written approval under this paragraph to an applicant therefor who has —

- (a) made his application in such form and manner, and provided such information, as may be specified in the Singapore Airworthiness Requirements (SAR);
- (b) furnished with his application such other information as the Authority may require; and
- (c) satisfied the Authority that he is, or will be, able to carry out the maintenance to which the application relates in a satisfactory manner in accordance with the Singapore Airworthiness Requirements (SAR).

*[S 278/2010 wef 15/05/2010]*

*[S 616/2017 wef 31/10/2017]*

(3) *[Deleted by S 181/2016 wef 01/05/2016]*

(4) The holder of a certificate or an approval issued under this paragraph shall, at all times, comply with the conditions contained in such certificate or approval.

*[S 278/2010 wef 15/05/2010]*

(5) Notwithstanding sub-paragraph (1), a person in a country other than Singapore (referred to in this paragraph as a permitted person) may engage in the maintenance of a Singapore registered aircraft or any aircraft component fitted or to be fitted to a Singapore registered aircraft if all of the following conditions are satisfied:

- (a) the permitted person is certified or approved by the competent authority of that country to engage in the maintenance of aircraft or aircraft components under the law of that country;
- (b) there is a mutual recognition agreement or arrangement between the Authority and the competent authority of that country relating to the system of approval of persons engaged in the maintenance of aircraft or aircraft components;
- (c) the permitted person meets the requirements of the mutual recognition agreement or arrangement referred to in sub-paragraph (b) and any other requirements as may be notified by the Authority;

*[S 616/2017 wef 31/10/2017]*

- (d) that country is specified for the purposes of this sub-paragraph in an advisory circular issued under paragraph 88B.

*[S 278/2010 wef 15/05/2010]*

*[S 348/2013 wef 17/06/2013]*

*[S 181/2016 wef 01/05/2016]*

(6) A permitted person who engages in the maintenance of a Singapore registered aircraft or any aircraft component fitted or to be fitted to a Singapore registered aircraft shall, for the purposes of such maintenance, comply with —

- (a) the requirements in the mutual recognition agreement or arrangement referred to in sub-paragraph (5)(b); and

- (b) any other requirements as may be notified by the Authority referred to in sub-paragraph (5)(c).

*[S 278/2010 wef 15/05/2010]*

*[S 181/2016 wef 01/05/2016]*

*[S 616/2017 wef 31/10/2017]*

### **Certificate or other approval for maintenance of foreign registered aircraft or aircraft components**

**8B.**—(1) A person may apply to the Authority for a certificate or other form of written approval to maintain —

- (a) a foreign registered aircraft; or  
(b) an aircraft component fitted or to be fitted to a foreign registered aircraft.

*[S 616/2017 wef 31/10/2017]*

(2) The Authority may, subject to such conditions as the Authority thinks fit, issue a certificate or other form of written approval under this paragraph to an applicant who has —

- (a) made the application in the form and manner, and provided the information, specified in the Singapore Airworthiness Requirements (SAR);  
(b) furnished with the application any other information that the Authority requires; and  
(c) satisfied the Authority that the applicant is, or will be, able to carry out the maintenance to which the application relates in a satisfactory manner, in accordance with the Singapore Airworthiness Requirements (SAR).

*[S 616/2017 wef 31/10/2017]*

(3) The holder of a certificate or other form of written approval issued under this paragraph must, at all times, comply with all conditions contained in the certificate or approval.

*[S 616/2017 wef 31/10/2017]*



**Certification of maintenance review**

9.—(1) A Singapore aircraft in respect of which a Certificate of Airworthiness in the Transport, Aerial Work or Private Category is in force shall not fly unless —

- (a) the aircraft (including in particular its engines), together with its equipment and radio station, is maintained in accordance with maintenance schedules approved by the Chief Executive in relation to that aircraft; and

*[S 278/2010 wef 15/05/2010]*

- (b) there is in force a certificate of maintenance review issued in accordance with this paragraph and such certificate shall certify the date on which the maintenance review was carried out and the date thereafter when the next review is due:

Provided that an aircraft may, notwithstanding that sub-paragraphs (1)(a) and (b) have not been complied with in relation to the radio station therein, fly for the sole purpose of enabling persons to be trained to perform duties in aircraft.

*[S 61/93 wef 19/03/1993]*

*[S 589/2016 wef 18/11/2016]*

(2) The approved maintenance schedule referred to in sub-paragraph (1)(a) shall specify the occasions on which a review must be carried out for the purpose of issuing a certificate of maintenance review.

(3) A certificate of maintenance review may be issued for the purposes of this paragraph only by —

- (a) the holder of an aircraft maintenance licence granted under paragraph 11, in accordance with the privileges of the rating endorsed on the licence as specified in the Singapore Airworthiness Requirements (SAR);

*[S 487/2006 wef 11/08/2006]*

- (b) the holder of an aircraft maintenance licence granted under the law of any country other than Singapore and rendered

valid under this Order, in accordance with the privileges of the rating endorsed thereon;

*[S 487/2006 wef 11/08/2006]*

- (c) the holder of an aircraft maintenance licence granted under the law of any country notified by the Chief Executive, in accordance with the privileges of the rating endorsed thereon and subject to any conditions that the Chief Executive may impose;

*[S 278/2010 wef 15/05/2010]*

- (d) a person whom the Chief Executive has authorised to issue a certificate of maintenance review in a particular case, and in accordance with that authority; or

*[S 278/2010 wef 15/05/2010]*

- (e) a person approved by the Chief Executive as being competent to issue such certificates, and in accordance with that approval:

*[S 278/2010 wef 15/05/2010]*

Provided that, upon approving a maintenance schedule, the Chief Executive may direct that certificates of maintenance review relating to that schedule, or to any part thereof specified in his direction, may be issued only by the holder of such a licence as is so specified.

*[S 278/2010 wef 15/05/2010]*

(4) A person referred to in sub-paragraph (3) shall not issue a certificate of maintenance review unless he has first verified that —

- (a) maintenance has been carried out on the aircraft in accordance with the maintenance schedule approved for that aircraft;
- (b) inspections and modifications required by the Chief Executive as provided in paragraph 7 have been completed as certified in the relevant certificate of release to service;

*[S 278/2010 wef 15/05/2010]*

- (c) defects entered in the technical log of the aircraft in accordance with regulation 101 of the Air Navigation

(91 — General Operating Rules) Regulations 2018 (G.N. No. S 441/2018) have been rectified or the rectification thereof has been deferred in accordance with procedures approved by the Chief Executive; and

*[S 278/2010 wef 15/05/2010]*

*[S 683/2018 wef 09/10/2018]*

(d) certificates of release to service have been issued in accordance with paragraph 10.

(5) For the purpose of sub-paragraph (4), operator of the aircraft shall furnish all such information relating to all such matters as may be necessary for the person referred to in that sub-paragraph.

(6) Certificate of maintenance review shall be issued in duplicate. One of the duplicates shall, during the period of validity of the certificate, be carried in the aircraft when paragraph 56 so requires, and the other shall be kept by the operator elsewhere than in the aircraft.

(7) *[Deleted by S 683/2018 wef 09/10/2018]*

(8) *[Deleted by S 683/2018 wef 09/10/2018]*

(9) Upon the rectification of any defect that is entered in a technical log in accordance with regulation 101 of the Air Navigation (91 — General Operating Rules) Regulations 2018, the operator must ensure that a copy of the certificate of release to service required under paragraph 10 is entered in the technical log in such a position or manner as to be readily identifiable with the entry of the defect to which the certificate relates.

*[S 683/2018 wef 09/10/2018]*

(10) The operator must ensure that a copy of the entries mentioned in sub-paragraph (9) is kept on the ground.

*[S 683/2018 wef 09/10/2018]*

(11) Subject to paragraph 59, every certificate of maintenance review shall be preserved by the operator of the aircraft for a period of two years following the expiry of the period of validity of the

certificate and for such further period as the Chief Executive may require in any particular case.

[S 278/2010 wef 15/05/2010]

### **Inspection, overhaul, repair, replacement and modification**

**10.**—(1) A person must not install or place on board for use in a Singapore aircraft any instrument or item of equipment that has been overhauled, repaired, modified or inspected unless, at the time of such installation or placement on board, there is in force in respect of the instrument or item of equipment (as applicable) —

- (a) a certificate of release to service issued in accordance with this paragraph; or
- (b) an equivalent release document,

that relates to the overhaul, repair, modification or inspection (as the case may be) of the instrument or item of equipment, as applicable.

[S 683/2018 wef 09/10/2018]

(2) [Deleted by S 162/2011 wef 01/04/2011]

(3) [Deleted by S 683/2018 wef 09/10/2018]

(4) A certificate of release to service may be issued for the purposes of this paragraph only by —

- (a) the holder of an aircraft maintenance licence granted under paragraph 11, in accordance with the privileges of the rating endorsed on the licence as specified in the Singapore Airworthiness Requirements (SAR);

[S 487/2006 wef 11/08/2006]

- (b) the holder of an aircraft maintenance licence granted under the law of any country other than Singapore and rendered valid under this Order, in accordance with the privileges of the rating endorsed thereon;

[S 487/2006 wef 11/08/2006]

- (c) the holder of an aircraft maintenance licence granted under the law of any country notified by the Chief Executive, in

accordance with the privileges of the rating endorsed thereon and subject to any conditions that he may impose;

*[S 278/2010 wef 15/05/2010]*

- (d) the holder of a certificate or a written approval issued by the Chief Executive in accordance with paragraph 8A;

*[S 278/2010 wef 15/05/2010]*

- (e) a person whom the Chief Executive has authorised to issue the certificate in a particular case; or

*[S 278/2010 wef 15/05/2010]*

- (f) in relation only to the adjustment and compensation of direct reading magnetic compasses, the holder of an Airline Transport Pilot's Licence (Aeroplanes).

*[S 497/2019 wef 15/07/2019]*

(5) Subject to paragraph 59, if the aircraft to which a certificate of release to service relates is a public transport aircraft or an aerial work aircraft, the certificate of release to service shall be preserved by the operator of the aircraft for the period of time for which he is required to preserve the log book relating to the same part of the aircraft or to the same equipment or apparatus as the case may be. In the case of any other aircraft the certificate shall be preserved by the operator of the aircraft for a period of two years.

(6) In this paragraph, the word “repair” includes, in relation to a compass the adjustment and compensation thereof and the word “repaired” shall be construed accordingly.

### **Aircraft maintenance licence**

**11.—**(1) The Chief Executive may grant an aircraft maintenance licence (which may include a rating limiting the licence to any particular type of aircraft or equipment) for the purposes of this Order if he is satisfied that the applicant is a fit and proper person to hold the licence and is qualified by his knowledge and experience to do so.

*[S 487/2006 wef 11/08/2006]*

*[S 278/2010 wef 15/05/2010]*

(2) For the purpose of this paragraph, the applicant shall furnish such evidence and undergo such examination and test as the Chief Executive may require.

*[S 487/2006 wef 11/08/2006]*

*[S 278/2010 wef 15/05/2010]*

(3) An aircraft maintenance licence granted under sub-paragraph (1) shall, subject to any rating as aforesaid, entitle the holder of the licence to issue a certificate of maintenance review, a certificate of release to service or a certificate of fitness for flight in accordance with the privileges of the licence as specified in the Singapore Airworthiness Requirements (SAR).

*[S 487/2006 wef 11/08/2006]*

(4) An aircraft maintenance licence shall, subject to any rating as aforesaid and subject to the holder of the licence maintaining competency and meeting the requirements for recent experience as specified in the Singapore Airworthiness Requirements (SAR), remain in force for the period specified in the licence, which period shall not exceed 24 months.

*[S 487/2006 wef 11/08/2006]*

(5) The Chief Executive may issue a certificate rendering valid for the purpose of this Order any aircraft maintenance licence granted under the law of any country other than Singapore, which certificate may be issued subject to such conditions and for such period as the Chief Executive thinks fit.

*[S 487/2006 wef 11/08/2006]*

*[S 278/2010 wef 15/05/2010]*

(6) An aircraft maintenance licence granted under this paragraph shall not be valid unless it bears thereon the ordinary signature of the holder in ink.

*[S 487/2006 wef 11/08/2006]*

(7) A holder of an aircraft maintenance licence granted under sub-paragraph (1) shall not perform any function to which his licence relates if he is under the influence of any psychoactive substance

which may render him unable to perform such function in a safe and proper manner.

*[S 487/2006 wef 11/08/2006]*

(8) A holder of an aircraft maintenance licence granted under sub-paragraph (1) shall not at any time engage in the problematic use of psychoactive substances.

*[S 487/2006 wef 11/08/2006]*

(9) The Chief Executive may, for the purpose of this paragraph and subject to such conditions as he thinks fit —

- (a) approve any course of training or instruction;
- (b) authorise a person to conduct any examination or test as the Chief Executive may specify; and

*[S 278/2010 wef 15/05/2010]*

- (c) approve a person to provide any course of training or instruction.

*[S 640/2006 wef 30/11/2006]*

*[S 278/2010 wef 15/05/2010]*

**12.** *[Deleted by S 683/2018 wef 09/10/2018]*

**13.** *[Deleted by S 683/2018 wef 09/10/2018]*

**13A.** *[Deleted by S 497/2019 wef 01/08/2019]*

**14.** *[Deleted by S 683/2018 wef 09/10/2018]*

### **Aircraft, engine and propeller log books**

**15.—**(1) In addition to any other log book required by or under this Order, the following log books shall be kept in respect of every public transport aircraft and aerial work aircraft registered in Singapore —

- (a) an aircraft log book; and
- (b) a separate log book in respect of each engine fitted in the aircraft; and
- (c) a separate log book in respect of each variable pitch propeller fitted to the aircraft.

The log books shall include the particulars respectively specified in the Seventh Schedule.

(2) Each entry in the log book shall be made as soon as it is practicable after the occurrence to which it relates, but in no event more than 7 days after the expiration of the certificate of maintenance review (if any) in force in respect of the aircraft at the time of the occurrence.

(3) Entries in a log book may refer to other documents, which shall be clearly identified, and any other document so referred to shall be deemed, for the purposes of this Order, to be part of the log book.

(4) It shall be the duty of the operator of every aircraft in respect of which log books are required to be kept to keep them or cause them to be kept in accordance with paragraphs (1) to (3).

(5) Subject to paragraph 59 every log book shall be preserved by the operator of the aircraft until a date two years after the aircraft, the engine or the variable pitch propeller, as the case may be, has been destroyed or has been permanently withdrawn from use.

### **Aircraft weight schedule**

**16.**—(1) Every flying machine and glider in respect of which a Certificate of Airworthiness issued or rendered valid under this Order is in force shall be weighed, and the position of its centre of gravity determined, at such times and in such manner as the Chief Executive may require in the case of that aircraft.

*[S 278/2010 wef 15/05/2010]*

(2) Upon the aircraft being weighed as mentioned in sub-paragraph (1), the operator of the aircraft shall prepare a weight schedule showing —

- (a) either the basic weight of the aircraft, that is to say, the weight of the aircraft empty together with the weight of the unusable fuel and unusable oil in the aircraft and of such items of equipment as are indicated in the weight schedule or such other weight as may be approved by the Chief Executive in the case of that aircraft; and

*[S 278/2010 wef 15/05/2010]*



- (b) either the position of the centre of gravity of the aircraft when the aircraft contains only the items included in the basic weight or such other position of the centre of gravity as may be approved by the Chief Executive in the case of that aircraft.

*[S 278/2010 wef 15/05/2010]*

(3) Subject to paragraph 59 the weight schedule shall be preserved by the operator of the aircraft until the expiry of a period of 6 months following the next occasion on which the aircraft is weighed for the purposes of this paragraph.

17. *[Deleted by S 683/2018 wef 09/10/2018]*

### **Compliance with Singapore Airworthiness Requirements (SAR)**

**17A.**—(1) The Chief Executive may, from time to time, in such manner as he thinks fit, issue the Singapore Airworthiness Requirements (SAR) containing the requirements, as determined by the Chief Executive, which shall be complied with by any of the following persons in any particular circumstances, in addition to any other obligation that is imposed on such person under this Order:

- (a) any applicant for, or holder of, a certificate of registration referred to in paragraph 4;
- (b) any applicant for, or holder of, a Certificate of Airworthiness referred to in paragraph 7;
- (c) any applicant for, or holder of, a certificate or other form of written approval referred to in paragraph 8, 8A or 8B;

*[S 616/2017 wef 31/10/2017]*

- (d) any person who is approved or authorised to issue a certificate of maintenance review under paragraph 9 or a certificate of release to service under paragraph 10;
- (e) any applicant for, or holder of, an aircraft maintenance licence referred to in paragraph 11;

- (f) any person who is authorised to conduct any examination or test or who is approved to provide any course of training or instruction, under paragraph 11.

[S 683/2018 wef 09/10/2018]

- (g) [Deleted by S 683/2018 wef 09/10/2018]

(2) The Chief Executive may, either generally or for such time as he may specify, waive the application of any provision of the Singapore Airworthiness Requirements (SAR) issued under this paragraph in respect of any person referred to in sub-paragraph (1).

[S 278/2010 wef 15/05/2010]

## PART IV

### AIRCRAFT CREW AND LICENSING

18. [Deleted by S 683/2018 wef 09/10/2018]

#### **Members of flight crew licences**

19.—(1) Subject to this paragraph, a person shall not act as a member of the flight crew of a Singapore aircraft unless he is the holder of an appropriate licence granted or rendered valid under this Order:

Provided that a person may, within Singapore, act as a flight radiotelephony operator without being the holder of such a licence if —

- (a) he does so as a pilot of a glider not flying for the purpose of public transport or aerial work, or as a person being trained in Singapore aircraft to perform duties as a member of the flight crew of an aircraft;
- (b) he is authorised to operate the radiotelephony station by the holder of the licence granted in respect of that station by the Info-communications Media Development Authority under the Telecommunications Act (Cap. 323);

[S 640/2006 wef 30/11/2006]

[S 475/2016 wef 01/10/2016]

- (c) messages are transmitted only for the purpose of instruction, or of the safety or navigation of the aircraft;
- (d) messages are transmitted only on a frequency exceeding 60 megacycles per second assigned by the Info-communications Media Development Authority under the Telecommunications Act (Cap. 323);

*[S 640/2006 wef 30/11/2006]*

*[S 475/2016 wef 01/10/2016]*

- (e) the transmitter is pre-set to one or more of the frequencies so assigned and cannot be adjusted in flight to any other frequency;
- (f) the operation of the transmitter requires the use only of external switches; and
- (g) the stability of the frequency radiated is maintained automatically by the transmitter.

(2) Subject to this paragraph, a person shall not act as a member of the flight crew required by or under this Order to be carried in an aircraft registered outside Singapore unless —

- (a) in the case of an aircraft flying for the purpose of public transport or aerial work he is the holder of an appropriate licence granted or rendered valid under the law of the country in which the aircraft is registered or under the law of the State of the operator; and

*[S 384/2000 wef 31/08/2000]*

- (b) in the case of any other aircraft, he is the holder of an appropriate licence granted or rendered valid under the law of the country in which the aircraft is registered or under this Order, and the Chief Executive does not in the particular case give a direction to the contrary.

*[S 278/2010 wef 15/05/2010]*

(3) For the purposes of this paragraph, a licence granted under the law of a Contracting State purporting to authorise the holder thereof to act as a member of the flight crew of an aircraft, not being a licence purporting to authorise him to act as a student pilot only, shall unless the Chief Executive in the particular case gives a direction to the

contrary be deemed to be a licence rendered valid under this Order but shall not entitle the holder —

- (a) to act as a member of the flight crew of any aircraft flying for the purpose of public transport or aerial work or on any flight in respect of which he receives remuneration for his services as a member of the flight crew on that flight; or
- (b) in the case of a pilot's licence, to act as pilot of any aircraft flying in controlled airspace in circumstances requiring compliance with the Instrument Flight Rules or to give any instruction in flying.

*[S 49/92 wef 01/02/1992]*

*[S 278/2010 wef 15/05/2010]*

(4) Notwithstanding sub-paragraph (1), a person may, unless the Certificate of Airworthiness in force in respect of the aircraft otherwise requires, act as pilot of Singapore aircraft for the purpose of undergoing training or tests for the grant or renewal of a pilot's licence or for the inclusion, renewal or extension of a rating thereon without being the holder of an appropriate licence, if the following conditions are complied with:

- (i) no other person shall be carried in the aircraft or in an aircraft being towed thereby except a person carried as a member of the flight crew in compliance with this Order, a person authorised by the Chief Executive to witness the aforesaid training or tests, or to conduct the aforesaid tests, or, if the pilot-in-command of the aircraft is the holder of an appropriate licence, a person carried for the purpose of being trained or tested as a member of the flight crew of an aircraft; and

*[S 278/2010 wef 15/05/2010]*

- (ii) the person acting as the pilot of the aircraft without being the holder of an appropriate licence shall not be the pilot-in-command of the aircraft unless within the period of 6 months immediately preceding he was serving as a qualified pilot of aircraft in the Armed Forces, and his physical condition has not, so far as he is aware, so

deteriorated during that period as to render him unfit for the licence for which he intends to qualify.

(5) Notwithstanding sub-paragraph (1), a person may act as a member of the flight crew of a Singapore aircraft without being the holder of an appropriate licence if, in so doing, he is acting in the course of his duty as a member of the Armed Forces.

(6) An appropriate licence for the purposes of this paragraph means a licence which entitles the holder to perform the functions which he undertakes in relation to the aircraft concerned and the flight on which it is engaged.

(7) This paragraph shall not apply to a person (other than a flight radio operator) by reason of his acting as a member of the flight crew of a glider which is not flying for the purpose of public transport or aerial work.

(8) Notwithstanding anything in this paragraph —

- (a) the holder of a licence granted or rendered valid under this Order being a licence endorsed to the effect that the holder does not satisfy in full the relevant international standard, shall not act as a member of the flight crew of a Singapore aircraft in the territory of a Contracting State other than Singapore, except in accordance with permission granted by the competent authorities of that State; and
- (b) the holder of a licence granted or rendered valid under the law of a Contracting State other than Singapore, being a licence endorsed as aforesaid, shall not act as a member of the flight crew of any aircraft in Singapore except in accordance with permission granted by the Chief Executive, whether or not the licence is or is deemed to be rendered valid under this Order.

*[S 278/2010 wef 15/05/2010]*

### **Grant and renewal of licences to members of flight crew**

**20.**—(1) The Chief Executive may grant licences, subject to such conditions as he thinks fit, for any of the following classes:

- (a) Student pilot's licence;

- (b) Private pilot's licence (aeroplanes);
- (c) Private pilot's licence (helicopters and gyroplanes);
- (d) Private pilot's licence (balloons and airships);
- (e) Commercial pilot's licence (aeroplanes);
- (f) Commercial pilot's licence (helicopters and gyroplanes);
- (g) Commercial pilot's licence (balloons);
- (h) Commercial pilot's licence (airships);
- (i) Commercial pilot's licence (gliders);
- (ia) Multi-crew Pilot's Licence (Aeroplanes);  
*[S 570/2011 wef 04/10/2011]*
- (j) Airline transport pilot's licence (aeroplanes);
- (k) Airline transport pilot's licence (helicopters and gyroplanes);
- (l) *[Deleted by S 497/2019 wef 15/07/2019]*
- (m) *[Deleted by S 497/2019 wef 15/07/2019]*
- (n) Flight radiotelephony operator's licence,  
*[S 166/2002 wef 15/04/2002]*

upon his being satisfied that the applicant is a fit and proper person to hold the licence and is qualified by reason of his knowledge, experience, competence, skill and physical fitness to act in the capacity to which the licence relates, and for that purpose the applicant may be required to undergo the appropriate medical examinations set out in the Fourteenth Schedule and any other examinations and tests or furnish any other evidence as the Chief Executive may determine. A licence of any class shall not be granted to any person who is under the minimum age specified for that class of licence in Part A of the Eighth Schedule.

*[S 278/2010 wef 15/05/2010]*

*[S 570/2011 wef 04/10/2011]*

(1A) Despite sub-paragraph (1) —

- (a) a licence of the class mentioned in sub-paragraph (1)(a), (g), (h) or (i) must not be granted to or renewed for any person who is 65 years of age or older; and
- (b) a licence of the class mentioned in sub-paragraph (1)(e), (f), (j) or (k) must not be granted to or renewed for any person who is 65 years of age or older except where the purpose of granting or renewing the licence is to entitle the holder of the licence to give instruction in flying an aircraft that is certificated for single pilot operations by the inclusion of a flying instructor's rating or assistant flying instructor's rating in the licence.

*[S 683/2018 wef 09/10/2018]*

(2) Subject to sub-paragraph (2A), a licence entitles the holder of the licence to perform the functions specified in respect of that licence in Part A of the Eighth Schedule under the heading “Privileges”.

*[S 803/2015 wef 30/12/2015]*

(2A) The licence is subject to the conditions of the licence and the following conditions:

- (a) subject to sub-paragraphs (10) and (11) and paragraphs 19(4) and 23(1), the holder of the licence is not entitled to perform any function specified in Part B of the Eighth Schedule in respect of a rating unless the licence includes that rating;
- (b) the holder of the licence is not entitled to perform any function relating to the licence if the holder knows or has reason to believe that the holder's physical condition renders the holder temporarily or permanently unfit to perform that function;
- (c) the holder of the licence is not entitled to perform any function relating to an instrument rating (aeroplanes), an instrument rating (helicopters), or an assistant flying instructor's rating unless the licence bears a certificate signed by a person authorised by the Chief Executive, stating that the holder has, within the period of 12 months

before the day on which the holder performs that function, passed a test of the holder's ability to perform that function;

- (d) the holder of the licence is not entitled to perform any function relating to a flying instructor's rating unless the licence bears a certificate signed by a person authorised by the Chief Executive, stating that the holder has, within the period of 24 months, or 12 months if the holder is 65 years of age or older, before the day on which the holder performs that function, passed a test of the holder's ability to perform that function;

*[S 683/2018 wef 09/10/2018]*

- (e) the holder of a pilot's licence is not entitled to exercise the privileges of an aircraft rating contained in the licence on a flight unless the licence bears, in accordance with the requirements contained in the Singapore Air Safety Publication (SASP), a valid certificate of test or experience appropriate to the functions the holder is to perform on that flight;

*[S 497/2019 wef 15/07/2019]*

- (f) a test referred to in sub-paragraphs (c) and (d) must be carried out either in flight or on the ground by means of a flight simulation training device.

*[S 803/2015 wef 30/12/2015]*

(3) The Chief Executive or any person appointed by him may, if he is satisfied that the applicant is qualified to act in the capacity to which a rating relates, include in the applicant's licence a rating of any of the classes specified in Part B of the Eighth Schedule and such rating shall be deemed to form part of the licence and shall entitle the holder of the licence to perform such functions as are specified in Part B of that Schedule in respect of that rating.

*[S 348/2013 wef 17/06/2013]*

(3A) The Chief Executive or any person appointed by him may renew any rating that is included in a licence referred to in sub-paragraph (3), if the Chief Executive or the person appointed by him, as the case may be, is satisfied, by a test or such other means



as the Chief Executive may determine, that the applicant continues to be competent to perform the functions to which the rating relates.

*[S 348/2013 wef 17/06/2013]*

(3B) Where a test referred to in sub-paragraph (3A) is required to be carried out, the test shall be carried out either in flight or by means of a flight simulation training device.

*[S 348/2013 wef 17/06/2013]*

(3C) A person who has failed any test or examination required under this paragraph shall not be entitled to fly or to perform any duty on any aircraft in the capacity for which that test or examination would have qualified him, had he passed that test or examination.

*[S 348/2013 wef 17/06/2013]*

(4) A licence and a rating remains in force for the periods indicated in the licence, not exceeding those respectively specified in the Eighth Schedule, and may be renewed by the Chief Executive from time to time upon his being satisfied that the applicant is a fit and proper person and is qualified as aforesaid.

*[S 278/2010 wef 15/05/2010]*

*[S 683/2018 wef 09/10/2018]*

(5) A licence granted under this paragraph shall not be valid unless it bears thereon the ordinary signature of the holder in ink.

*[S 487/2006 wef 11/08/2006]*

(6) Subject to paragraph 6 of the Fourteenth Schedule, every holder of a licence, other than a flight radiotelephony operator's licence, granted under this paragraph shall, upon applying for the renewal of the licence and upon such other occasions as the Chief Executive may require, submit himself to medical examination by a person approved by the Chief Executive either generally or in a particular case who shall make a report to the Chief Executive in such form as the Chief Executive may require.

*[S 325/2000 wef 01/08/2000]*

*[S 278/2010 wef 15/05/2010]*

(7) Subject to sub-paragraphs (7A) and (7B), a holder of a licence granted under this paragraph or rendered valid under paragraph 21 who —

- (a) suffers any personal injury involving incapacity to undertake the functions to which his licence relates;
- (b) suffers any illness involving incapacity to undertake those functions throughout a period of more than 20 days;
- (c) knows or has reason to believe that she is pregnant;
- (d) is prescribed any medication upon being diagnosed with, or any new medication while receiving or undergoing treatment for, any long-term or chronic disease or condition;

*[S 178/2019 wef 31/03/2019]*

- (e) has received any medical treatment provided by a hospital, or a person who is qualified and licensed to practise as a specialist in any branch of medicine, in Singapore or elsewhere;

*[S 178/2019 wef 31/03/2019]*

- (f) is given a notice of unfitness under regulation 5(5) of the Air Navigation (99 — Breath Testing for Alcohol) Regulations 2019 (G.N. No. S 177/2019); or

*[S 178/2019 wef 31/03/2019]*

- (g) knows or has reason to believe that the holder has a problem with dependency on psychoactive substances,

*[S 178/2019 wef 31/03/2019]*

shall —

- (i) inform the Chief Executive in writing —
  - (A) as soon as possible, in the case of any matter in sub-paragraph (a), (c), (d), (e), (f) or (g); or
  - (B) as soon as possible after a period of 20 days has elapsed, in the case of any illness in sub-paragraph (b); and

*[S 178/2019 wef 31/03/2019]*

- (ii) not exercise the privileges of the licence and related ratings until he has satisfied the medical assessor that his medical

fitness has been restored to the standard required in paragraph 7 of the Fourteenth Schedule.

*[S 487/2006 wef 11/08/2006]*

*[S 617/2012 wef 17/12/2012]*

*[S 178/2019 wef 31/03/2019]*

(7A) Sub-paragraph (7) does not apply to the holder of a flight radiotelephony operator's licence.

*[S 178/2019 wef 31/03/2019]*

(7B) *[Deleted by S 497/2019 wef 15/07/2019]*

(8) Subject to sub-paragraph (8B), the privileges of a licence and related ratings granted under this Part are deemed to be suspended —

- (a) upon the occurrence of any event in sub-paragraph (7)(a), (d), (e) or (f); or
- (b) at the end of a period of 20 days, where the holder of the licence suffers from any illness in sub-paragraph (7)(b).

*[S 178/2019 wef 31/03/2019]*

(8A) The suspension under sub-paragraph (8) ceases if the Chief Executive —

- (a) is satisfied, after the holder of the licence undergoes such medical examination as the Chief Executive may require, that the holder is fit to resume exercising the privileges of the holder's licence and related ratings; or
- (b) otherwise determines that the holder may resume exercising the privileges of the holder's licence and related ratings without undergoing a medical examination.

*[S 178/2019 wef 31/03/2019]*

(8B) Sub-paragraph (8) does not apply to the privileges of a flight radiotelephony operator's licence and related ratings.

*[S 178/2019 wef 31/03/2019]*

*[S 497/2019 wef 15/07/2019]*

(9) In respect of a holder of a licence mentioned in sub-paragraph (7)(c) —

- (a) the privileges of the holder's licence and related ratings granted under this Part are deemed to be suspended upon the pregnancy of the holder being diagnosed; and
- (b) the suspension under sub-paragraph (a) ceases if the Chief Executive is satisfied, upon the holder undergoing such medical examination as the Chief Executive may require, that the holder is fit to resume exercising the privileges of the holder's licence and related ratings.

[S 178/2019 wef 31/03/2019]

(9A) In respect of a holder of a licence mentioned in sub-paragraph (7)(g) —

- (a) the privileges of the licence and related ratings granted under this Part are deemed to be suspended upon the Chief Executive being informed by the holder under sub-paragraph (7)(i)(A); and
- (b) the suspension under sub-paragraph (a) ceases if the Chief Executive is satisfied, after the holder undergoes such medical examination as the Chief Executive may require, that the holder is fit to resume exercising the privileges of the holder's licence and related ratings.

[S 178/2019 wef 31/03/2019]

(10) Nothing in this Order shall be taken to prohibit the holder of:

- (a) a Commercial Pilot's Licence (Aeroplanes) or an Airline Transport Pilot's Licence (Aeroplanes) from acting as pilot-in-command of an aeroplane carrying passengers by night by reason of the lack of a night rating in his licence; or
- (b) a Multi-crew Pilot's Licence (Aeroplanes) from acting as pilot-in-command of a single-crew aeroplane carrying passengers by night by reason of the lack of a night rating in his licence provided that such licence entitles him to act as a pilot-in-command of a single-crew aeroplane.

[S 570/2011 wef 04/10/2011]

(11) Nothing in this Order shall prohibit the holder of a pilot's licence from acting as pilot of an aircraft not exceeding 5,700 kg

maximum total weight authorised when with the authority of the Chief Executive he is testing any person in pursuance of sub-paragraph (1) or (3) notwithstanding that the type of aircraft in which the test is conducted is not specified in the aircraft rating included in his licence.

*[S 278/2010 wef 15/05/2010]*

(12) A person must not offer a flight simulation training device for the conduct of a test or a course of flight training or instruction unless —

- (a) in the case where the flight simulation training device is located in a foreign country and there is a mutual recognition agreement or arrangement between the Authority and the competent authority of the foreign country relating to the system of certification or approval for the flight simulation training device —
  - (i) the flight simulation training device is certified or approved by the competent authority of the foreign country under the laws of the foreign country, for such use; and
  - (ii) for the purposes of this sub-paragraph, the foreign country is specified in an advisory circular issued under paragraph 88B; or
- (b) in any other case, the person has obtained from the Chief Executive a certificate of qualification referred to in sub-paragraph (12B) for the flight simulation training device.

*[S 803/2015 wef 30/12/2015]*

(12A) A person must not use a flight simulation training device for the conduct of a test, examination or a course of flight training or instruction unless —

- (a) in the case where the flight simulation training device is located in a foreign country and there is a mutual recognition agreement or arrangement between the Authority and the competent authority of the foreign

country relating to the system of certification or approval for the flight simulation training device —

- (i) the flight simulation training device is certified or approved by the competent authority of the foreign country under the laws of the foreign country, for such use; and
  - (ii) for the purposes of this sub-paragraph, the foreign country is specified in an advisory circular issued under paragraph 88B; or
- (b) in any other case, the flight simulation training device has been approved by the Chief Executive, by way of a certificate of qualification referred to in sub-paragraph (12B), for such use.

*[S 803/2015 wef 30/12/2015]*

(12B) The Chief Executive may issue or renew a certificate of qualification for a flight simulation training device, subject to such conditions as the Chief Executive thinks fit.

*[S 348/2013 wef 17/06/2013]*

(12C) Notwithstanding sub-paragraph (12)(b), a person who, immediately before 17th June 2013, has in force a certificate of qualification for a flight simulation training device granted by the Chief Executive under the Singapore Air Safety Publication (SASP) (referred to in this paragraph as the relevant permit) shall not be required to obtain a certificate of qualification under sub-paragraph (12)(b), for the same flight simulation training device, for the period which the relevant permit is in force.

*[S 348/2013 wef 17/06/2013]*

*[S 803/2015 wef 30/12/2015]*

(12D) A person who offers for use or uses a flight simulation training device under sub-paragraph (12)(a) or (12A)(a) must comply with any other requirement that the Chief Executive may specify.

*[S 803/2015 wef 30/12/2015]*

(13) Without prejudice to any other provision of this Order, the Chief Executive may, for the purpose of this paragraph, either absolutely or subject to such conditions as he thinks fit —

- (a) approve any course of training or instruction;
- (b) authorise a person to conduct such examinations or tests as he may specify;

*[S 299/2009 wef 30/06/2009]*

- (c) approve a person to provide any course of training or instruction; and

*[S 299/2009 wef 30/06/2009]*

- (d) approve the use of a flight simulation training device by —
  - (i) any person authorised under sub-paragraph (b) to conduct any examination or test; or
  - (ii) any person approved under sub-paragraph (c) to provide any course of flight training or instruction.

*[S 803/2015 wef 30/12/2015]*

(14) The following persons shall comply with the relevant requirements contained in the Singapore Air Safety Publication (SASP) issued by the Chief Executive:

- (a) an applicant for or the holder of any licence referred to in this paragraph;
- (b) an applicant for or the holder of any certificate of qualification for a flight simulation training device referred to in sub-paragraph (12B);
- (c) a person applying to be authorised or authorised under sub-paragraph (13)(b) to conduct any examination or test;
- (d) a person applying to be approved or approved under sub-paragraph (13)(c) to provide any course of training or instruction;
- (e) a person applying to be approved or approved under sub-paragraph (13)(d)(i) to use a flight simulation training device to conduct any examination or test;

*[S 803/2015 wef 30/12/2015]*

- (f) a person applying to be approved or approved under sub-paragraph (13)(d)(ii) to use a flight simulation training

device to provide any course of flight training or instruction.

[S 803/2015 wef 30/12/2015]

### **Limitation on privileges of pilots of 60 years and above**

**20A.**—(1) A holder of a licence granted under paragraph 20(1)(e), (f), (ia), (j) or (k) who is 60 years of age or older may act as a pilot of a public transport aircraft only if —

- (a) the holder is a member of a crew with 2 or more pilots; and
- (b) the holder is below 65 years of age at the time of the flight.

[S 683/2018 wef 09/10/2018]

(2) A holder of a licence granted under paragraph (20)(1)(e), (f), (j) or (k) who is 65 years of age or older must not act as a pilot on any aircraft engaged in public transport or aerial work.

[S 351/2015 wef 02/06/2015]

[S 683/2018 wef 09/10/2018]

### **Validation of licences**

**21.** The Chief Executive may issue a certificate of validation rendering valid for the purposes of this Order any licence as a member of the flight crew of aircraft granted under the law of any country other than Singapore. A certificate of validation may be issued subject to such conditions and for such period as the Chief Executive thinks fit.

[S 278/2010 wef 15/05/2010]

### **Personal flying log book**

**22.**—(1) Every member of the flight crew of a Singapore aircraft, and every person who engages in flying for the purpose of qualifying for the grant or renewal of a licence under this Order or undergoing tests or receiving instructions in flying for admission into the Armed Forces, shall keep a personal flying log book in which the following particulars shall be recorded:

- (a) the name and address of the holder of the log book;



(b) particulars of the holder's licence (if any) to act as a member of the flight crew of an aircraft; and

(c) the name and address of his employer (if any);

(2) Particulars of each flight during which the holder of the log book acted either as a member of the flight crew of an aircraft or for the purpose of qualifying for the grant or renewal of a licence under this Order, as the case may be, shall be recorded in the log book at the end of each flight or as soon thereafter as is reasonably practicable, including —

(a) the date, the places at which the holder of the log book embarked on and disembarked from the aircraft and the time spent during the course of a flight when he was acting in either capacity;

(b) the type and registration marks of the aircraft;

(c) the capacity in which he acted in flight;

(d) particulars of any special conditions under which the flight was conducted, including night flying and instrument flying; and

(e) particulars of any test or examination undertaken whilst in flight.

(3) [*Deleted by S 166/2002 wef 15/04/2002*]

(4) Particulars of any test or examination taken whilst in a flight simulator shall be recorded in the log book, including —

(a) the date of the test or examination;

(b) the type of simulator;

(c) the capacity in which he acted; and

(d) the nature of the test or examination.

[*S 49/92 wef 01/02/1992*]

### **Instructions in flying**

**23.**—(1) A person shall not give any instruction in flying to which this paragraph applies unless —

- (a) he holds a licence, granted or rendered valid under this Order, entitling him to act as pilot-in-command of the aircraft for the purpose and in the circumstances under which the instruction is to be given; and
  - (b) his licence includes a flying instructor's rating or an assistant flying instructor's rating entitling the holder to give the instruction.
- (2) This paragraph shall apply to instruction in flying given to any person flying or about to fly a flying machine or glider for the purpose of becoming qualified for —
- (a) the grant of a pilot's licence; and
  - (b) the inclusion or variation of any rating in his licence.
- (3) This paragraph shall not apply to any instruction in flying to a person for the purpose of becoming qualified for the inclusion in his licence of an aircraft rating entitling him to act as pilot of a multi-engined aircraft, or of any aircraft of any class appearing in column 4 of the Table in Part A of the First Schedule if that person has previously been entitled under the Order, or qualified in the Armed Forces, to act as pilot of a multi-engined aircraft, or of an aircraft of that class as the case may be.

[S 49/92 wef 01/02/1992]

### **Specific approval for use of flight simulation training device by Singapore operator**

**23A.**—(1) A Singapore operator must not use a flight simulation training device for any purpose in the applicable air operations regulations unless the operator has specific approval from the Chief Executive to use the flight simulation training device for that purpose and —

- (a) in the case of a flight simulation training device located in a foreign country, where there is a mutual recognition agreement or arrangement between the Authority and the competent authority of the foreign country relating to the system of certification or approval for the flight simulation training device —

- (i) the flight simulation training device is certified or approved by the competent authority of the foreign country under the laws of the foreign country for such use; and
    - (ii) for the purposes of this sub-paragraph, the foreign country is specified in an advisory circular issued under paragraph 88B; or
  - (b) in any other case, the flight simulation training device is approved by the Chief Executive, by way of a certificate of qualification issued under paragraph 20(12B), for such use.
- (2) The Chief Executive may grant the specific approval mentioned in sub-paragraph (1) either absolutely or subject to such conditions as the Chief Executive considers fit.
- (3) A Singapore operator that is granted the specific approval under sub-paragraph (2) —
- (a) must pay the applicable annual fee specified in paragraph 7(4) of the Twelfth Schedule; and
  - (b) must comply with the conditions (if any) contained in the approval and the relevant requirements contained in the Singapore Air Safety Publication (SASP) issued by the Chief Executive.
- (4) In this paragraph —
- “air operations regulations” means —
- (a) the Air Navigation (91 — General Operating Rules) Regulations 2018;
  - (b) the Air Navigation (98 — Special Operations) Regulations 2018 (G.N. No. S 442/2018);
  - (c) the Air Navigation (121 — Commercial Air Transport by Large Aeroplanes) Regulations 2018 (G.N. No. S 444/2018);
  - (d) the Air Navigation (125 — Complex General Aviation) Regulations 2018 (G.N. No. S 501/2018);

- (e) the Air Navigation (135 — Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018 (G.N. No. S 445/2018); or
- (f) the Air Navigation (137 — Aerial Work) Regulations 2018 (G.N. No. S 502/2018);

“Singapore operator” means —

- (a) a holder of an aerial work certificate granted under the Air Navigation (137 — Aerial Work) Regulations 2018;
- (b) a holder of an air operator certificate granted under the Air Navigation (119 — Air Operator Certification) Regulations 2018 (G.N. No. S 443/2018); or
- (c) a holder of a complex general aviation certificate granted under the Air Navigation (125 — Complex General Aviation) Regulations 2018.

*[S 683/2018 wef 09/10/2018]*

### **Glider pilot — minimum age**

**24.** A person under the age of 16 years shall not act as pilot-in-command of a glider.

**24A.** *[Deleted by S 683/2018 wef 09/10/2018]*

### **PART V**

*[Deleted by S 683/2018 wef 09/10/2018]*

### **PART VA**

*[Deleted by S 683/2018 wef 09/10/2018]*

## PART VB

CARRIAGE OF MUNITIONS OF  
WAR AND DANGEROUS GOODS

[S 423/2010 wef 02/08/2010]

**Definitions of this Part**

**50B.** In this Part, unless the context otherwise requires —

“agent” means any person who undertakes the responsibilities or carries out any of the functions of an operator or a shipper, as the case may be, on behalf of the operator or shipper in relation to the carriage of munitions of war or dangerous goods;

[S 423/2010 wef 02/08/2010]

“baggage” means the personal property of passengers or crew carried on an aircraft by agreement with the operator;

[S 423/2010 wef 02/08/2010]

[S 570/2011 wef 04/10/2011]

“cargo” means any property carried on an aircraft other than mail and accompanied or mishandled baggage;

[S 423/2010 wef 02/08/2010]

[S 162/2011 wef 01/04/2011]

“cargo aircraft” means an aircraft, other than a passenger aircraft, which carries goods or property;

[S 124/2012 wef 02/04/2012]

“consignment” means one or more packages of dangerous goods received and accepted as a single lot by an operator from a single shipper on a single occasion for conveyance from a single address to a single consignee at a single destination;

[S 21/2015 wef 26/01/2015]

“dangerous goods” means any article or substance which is capable of posing a risk to health, safety, property or the environment and which is set out in the list of dangerous goods in the Technical Instructions or is classified as such according to the Technical Instructions;

“dangerous goods accident” means any occurrence associated with and related to the transport or carriage of munitions of war or dangerous goods by air which results in fatal or serious injury to a person or major property or environmental damage;

*[S 570/2011 wef 04/10/2011]*

“dangerous goods incident” means any occurrence, other than a dangerous goods accident, which is associated with and related to the transport or carriage of munitions of war or dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained, and includes any occurrence relating to the transport or carriage of munitions of war or dangerous goods and which seriously jeopardises the aircraft or its occupants;

*[S 570/2011 wef 04/10/2011]*

“exemption” means an authorisation issued by the Chief Executive under paragraph 50H providing relief from the provisions of the Technical Instructions;

*[S 124/2012 wef 02/04/2012]*

“ID number” means an identification number specified in the Technical Instructions for an item of dangerous goods which has not been assigned a UN number;

“mail” means any letter, correspondence, postal article or thing, tendered by and intended for delivery to a postal service in accordance with the provisions of the Convention regulating the affairs of the Universal Postal Union;

*[S 351/2015 wef 02/06/2015]*

“munitions of war” means any weapons and ammunition designed for use in warfare or against any person, including any part designed for such weapons and ammunition;

“passenger aircraft” means an aircraft that carries any person other than a crew member, an operator’s employee in an official capacity, an authorised representative of an appropriate national authority or a person accompanying a consignment or other cargo;

*[S 124/2012 wef 02/04/2012]*

“Postal Authority” has the same meaning as in section 2(1) of the Postal Services Act (Cap. 237A);

*[S 351/2015 wef 02/06/2015]*

“postal service” has the same meaning as in section 2(1) of the Postal Services Act;

*[S 351/2015 wef 02/06/2015]*

“public postal operator” means any provider of postal services designated by the Postal Authority under section 7 of the Postal Services Act to operate postal services and to fulfil the related obligations of the Convention regulating the affairs of the Universal Postal Union on its territory;

*[S 351/2015 wef 02/06/2015]*

“serious injury” means any injury which is sustained by a person in an accident and which —

- (a) requires hospitalisation for a period more than 48 hours, where such period commences within 7 days from the date the injury was sustained;
- (b) results in a fracture of any bone, other than a simple fracture of any finger, toe or nose;
- (c) involves lacerations which cause severe haemorrhage or nerve, muscle or tendon damage;
- (d) involves injury to any internal organ;
- (e) involves second or third degree burns, or any burns affecting more than 5% of the surface of the body; or
- (f) involves verified exposure to infectious substances or injurious radiation;

“State of Origin” means the State in the territory of which the consignment was first loaded on an aircraft;

[S 21/2015 wef 26/01/2015]

“Technical Instructions” means the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284), approved and issued in accordance with the procedure established by the Council of the International Civil Aviation Organisation;

[S 570/2011 wef 04/10/2011]

“UN number” means the four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

[S 423/2010 wef 02/08/2010]

### **Permit for carriage of munitions of war**

**50C.**—(1) Subject to sub-paragraph (5), an aircraft shall not carry or have loaded onto it as cargo any munitions of war unless —

- (a) the operator of the aircraft has been granted a munitions of war permit under sub-paragraph (3); and
- (b) such goods are carried or loaded as cargo in accordance with —
  - (i) the Technical Instructions; and
  - (ii) the conditions of the munitions of war permit granted under sub-paragraph (3).

[S 497/2019 wef 15/07/2019]

(2) No person shall take, or cause to be taken, on board any aircraft or to deliver, or cause to be delivered, for loading or carriage thereon, any goods which he knows or suspects, or has reason to know or suspect, to be munitions of war unless the Technical Instructions have been complied with.

(3) The Chief Executive may, subject to such conditions as he thinks fit, grant to the operator of any aircraft a munitions of war permit for the carriage of munitions of war on board the aircraft —



- (a) on a single return flight (ad hoc permit); or
- (b) on 10 or more return flights over a period of 6 months (block permit).

(4) An application for a munitions of war permit under sub-paragraph (3) shall be submitted to the Chief Executive no later than 7 days before the relevant date of shipment and shall include the following information:

- (a) the reason why it is essential for the munitions of war to be carried by air;
- (b) a proposal (including any safety control measures specified by the applicant) on achieving a level of safety equivalent to that provided by the instructions specified in the Technical Instructions;
- (c) the proposed proper shipping name, classification and UN number of the munitions of war with full supporting technical data;
- (d) the proposed packaging;
- (e) the quantity to be carried;
- (f) any special handling required and any special emergency response information;
- (g) names and addresses of the consignor and consignee; and
- (h) the airports of departure and destination and the proposed dates of shipment and routing.

*[S 423/2010 wef 02/08/2010]*

(5) Where an operator of an aircraft has diplomatic clearance from the Government to land the aircraft in Singapore, the operator is not required, for the period of time that the diplomatic clearance is valid, to obtain a munitions of war permit under sub-paragraph (3) to carry or have loaded onto the aircraft as cargo any munitions of war.

*[S 497/2019 wef 15/07/2019]*

**Permit for carriage of dangerous goods**

**50D.**—(1) Subject to sub-paragraph (7), an aircraft shall not carry or have loaded onto it any dangerous goods unless —

- (a) the operator of the aircraft has been granted a dangerous goods permit under sub-paragraph (3); and
- (b) such goods are carried or loaded as cargo in accordance with —
  - (i) the Technical Instructions; and
  - (ii) the conditions of the dangerous goods permit granted under sub-paragraph (3).

*[S 497/2019 wef 15/07/2019]*

(2) Subject to sub-paragraphs (5) and (6), no person shall take, or cause to be taken, on board any aircraft or deliver, or cause to be delivered, for loading or carriage thereon, any dangerous goods which he knows or suspects, or ought to know or suspect, to be dangerous goods unless the Technical Instructions have been complied with.

(3) The Chief Executive may, subject to such conditions as he thinks fit, grant to the operator of any aircraft a dangerous goods permit for the carriage of dangerous goods on board the aircraft —

- (a) on a single return flight (ad hoc permit); or
- (b) on 10 or more return flights over a period of 6 months (block permit).

(4) An application for a dangerous goods permit under sub-paragraph (1) shall be submitted to the Chief Executive no later than 7 days before the relevant date of shipment.

(5) Sub-paragraph (2) shall not apply to dangerous goods that are carried in compliance with sub-paragraph (6) and that are —

- (a) required to be aboard the aircraft in accordance with the relevant airworthiness and technical requirements or that are authorised by the State of the operator to meet special requirements;

- (b) required for providing, during flight, medical aid to a patient;
- (c) required for providing, during flight, veterinary aid or a humane killer for an animal;
- (d) required for providing, during flight, aid in connection with search and rescue operations;
- (e) permitted for carriage by passengers or crew members in accordance with sub-paragraph (6)(c);
- (f) intended for use or sale during the flight in question;
- (g) vehicles carried in aircraft designed or modified for vehicle ferry operations; or
- (h) required for the propulsion of the means of transport or the operation of its specialised equipment during transport such as refrigeration units or that are required in accordance with any technical requirements such as fire extinguishers.

(6) The goods specified in sub-paragraph (5) shall be carried in accordance with Part V of the Nineteenth Schedule, the applicable paragraphs of Part 1 of the Technical Instructions and the following sub-paragraphs:

- (a) the goods specified in sub-paragraph (5)(a) shall only be carried on board an aircraft —
  - (i) if they are required to be carried on the aircraft by or under this Order or are otherwise intended for use on the aircraft for the purpose of the good order of the flight in accordance with the normal practice whether or not, in either case, such goods are required to be carried or intended to be used on that particular flight; or
  - (ii) when they are intended as replacements or have been removed for replacement, if they comply with paragraph 2.2.2 of Part 1 of the Technical Instructions;

- (b) the goods specified in sub-paragraph (5)(b) and (c) shall only be carried on board an aircraft if —
- (i) they are or may be required for use during the flight;
  - (ii) they are or may be required for use during a subsequent flight by the same aircraft and it will not be practicable to load the goods onto the aircraft in the intervening period before the commencement of that subsequent flight; or
  - (iii) they were used or might have been required for use during a previous flight by the same aircraft and it has not been practicable to unload them from the aircraft since that flight;
- (c) the goods specified in sub-paragraph (5)(e) shall only be carried by passengers or crew members on board an aircraft if they comply with the provisions in Part 8 of the Technical Instructions;
- (d) the goods specified in sub-paragraph (5)(f) shall only be carried on board an aircraft if the Technical Instructions identify them as being items which can be carried on the aircraft for sale or use during a flight or, when they are intended as replacements for such items or have been removed for replacement, they are carried in accordance with paragraph 2.2.3 of Part 1 of the Technical Instructions.

*[S 423/2010 wef 02/08/2010]*

(7) Where an operator of an aircraft has diplomatic clearance from the Government to land the aircraft in Singapore, the operator is not required, for the period of time that the diplomatic clearance is valid, to obtain a dangerous goods permit under sub-paragraph (3) to carry or have loaded onto the aircraft any dangerous goods.

*[S 497/2019 wef 15/07/2019]*

### **Approval for transport of dangerous goods or other purposes**

**50DA.**—(1) In addition to paragraph 50D, where the Technical Instructions specify that an approval is required —

- (a) for the transport of dangerous goods that are otherwise forbidden on passenger or cargo aircraft; or
- (b) for other purposes as provided for in the Technical Instructions,

the operator of the aircraft or the shipper, as the case may be, shall apply to the Chief Executive for such approval in a form or manner as may be determined by the Chief Executive.

(2) An application for an approval shall be submitted to the Chief Executive —

- (a) in the case of an application under sub-paragraph (1)(a), at least 14 days before the relevant date of shipment of the dangerous goods; or
- (b) in the case of an application under sub-paragraph (1)(b), at least 14 days before the relevant date on which the other purposes are to be carried out.

(3) The Chief Executive may grant to the operator of the aircraft or the shipper, as the case may be, a written approval subject to such conditions as he thinks fit.

(4) An approval granted under sub-paragraph (3) shall be valid for such period (not exceeding one year) as the Chief Executive may determine.

(5) The Chief Executive may vary, suspend or revoke the written approval granted under sub-paragraph (3) where he has reasonable grounds to believe that —

- (a) any provision of the Technical Instructions or this Order has not been complied with; or
- (b) any condition of the written approval referred to in sub-paragraph (3) has not been complied with.

*[S 124/2012 wef 02/04/2012]*

### **Dangerous goods in air mail**

**50DB.**—(1) Only a public postal operator acting in accordance with this paragraph, and no other person, may accept dangerous goods as or in mail to convey or deliver by post by air.

(2) A public postal operator may accept any dangerous goods as or in mail to convey or deliver by post by air only if the dangerous goods are of the kind permitted under the Technical Instructions to be carried by air as mail.

(3) A public postal operator must not accept any dangerous goods as or in mail to convey or deliver by post by air unless the public postal operator —

- (a) has in place procedures (which are approved by the Chief Executive) for controlling the introduction of such dangerous goods in air transport;
- (b) complies with the provisions of Part IV of the Nineteenth Schedule; and
- (c) if the dangerous goods are lithium ion batteries or lithium metal batteries contained in equipment, does so in accordance with the prior approval of the Chief Executive for those goods.

(4) An application for any approval referred to in this paragraph must be made to the Chief Executive at the time and in the form and manner specified by the Chief Executive.

(5) Any approval referred to in this paragraph may be granted subject to such terms and conditions but no approval may be granted under sub-paragraph (3)(c) for a period exceeding one year.

(6) To avoid doubt, nothing in this paragraph authorises the conveyance, despatch or delivery by post of any article that is prohibited by the Postal Services Act or any subsidiary legislation made thereunder.

*[S 351/2015 wef 02/06/2015]*

### **Responsibilities of operator and shipper**

**50E.**—(1) Every operator of an aircraft, including his agent, who has been granted a munitions of war permit under paragraph 50C, a dangerous goods permit under paragraph 50D or an approval for transport of dangerous goods or other purposes under

paragraph 50DA shall comply with the relevant provisions of Parts II, IV and V of the Nineteenth Schedule.

*[S 124/2012 wef 02/04/2012]*

(2) Every shipper, including his agent, who intends to consign any munitions of war or dangerous goods for carriage by air shall comply with the relevant provisions of Parts III and IV of the Nineteenth Schedule.

*[S 423/2010 wef 02/08/2010]*

### **Power to inspect, examine and obtain samples, etc.**

**50F.**—(1) An authorised person may inspect, examine and take samples of any goods which the authorised person has reasonable grounds to suspect may be munitions of war or dangerous goods in respect of which any provision of this Part, the Technical Instructions or the Nineteenth Schedule have not been complied with.

(2) An authorised person may open, or require to be opened, any baggage or package which the authorised person has reasonable grounds to suspect may contain munitions of war or dangerous goods in respect of which any provision of this Part, the Technical Instructions or the Nineteenth Schedule have not been complied with.

(3) An authorised person may —

(a) enter at any time any premises occupied by any person —

(i) for the purposes of carrying out his duties under sub-paragraphs (1) and (2); or

(ii) for the purpose of ascertaining whether there is, or has been, a contravention of any provision of this Part, the Technical Instructions or the Nineteenth Schedule;

(b) inspect any book, document or other record relating to the loading or carriage of any munitions of war or dangerous goods which he reasonably suspects may be in contravention of any provision of this Part, the Technical Instructions or the Nineteenth Schedule; and

(c) take photographs of the premises, goods, baggage, package and any other property or material found thereon.

(4) No person shall refuse to give access to, or wilfully obstruct, hinder or delay, any authorised person in the performance and execution of any matter or thing which he is authorised to do.

(5) Subject to paragraph (6), any sample taken by an authorised person under this paragraph shall be retained for so long as the Chief Executive considers necessary in all the circumstances and shall be disposed of in such manner as the Chief Executive considers appropriate in all the circumstances.

(6) Without prejudice to the generality of sub-paragraph (5), any sample taken under this paragraph may be retained —

(a) for use as evidence at a trial for an offence; or

(b) for forensic examination or for investigation in connection with an offence.

*[S 423/2010 wef 02/08/2010]*

### **Reporting and investigation of occurrences**

**50G.**—(1) The operator of a Singapore aircraft shall report to the Chief Executive, in accordance with sub-paragraphs (3), (4) and (5), any dangerous goods accident, dangerous goods incident or the finding of undeclared or misdeclared munitions of war or dangerous goods in cargo or passenger's baggage on board any aircraft operated by that operator.

(2) An operator of any aircraft, other than a Singapore aircraft, shall report to the Chief Executive, in accordance with sub-paragraphs (3), (4) and (5), any dangerous goods accident, dangerous goods incident or the finding of undeclared or misdeclared munitions of war or dangerous goods in cargo or passenger's baggage on board any aircraft that is operated by that operator and that lands in or departs from Singapore.

(3) A report required under paragraph (1) or (2) shall contain such of the following information as is appropriate to the occurrence:

(a) date of the occurrence;



- (b) State of the operator;
- (c) State of Origin;
- (d) State of registry;
- (e) location of the occurrence, flight number and flight date;
- (f) description of the goods and the reference number of the air waybill, pouch, baggage tag and ticket;
- (g) proper shipping name (including the technical name, if applicable);
- (h) UN or ID number, whichever is applicable;
- (i) class or division of the goods in accordance with the Technical Instructions and any subsidiary risk;
- (j) type of packaging and the packaging specification marking;
- (k) quantity of the munitions of war or dangerous goods;
- (l) name and address of the shipper or passenger;
- (m) suspected cause of the occurrence;
- (n) action taken upon discovery of the occurrence, including any mitigation measures;
- (o) any serious injury, death or damage of property caused by the occurrence;
- (p) any other reporting action taken;
- (q) name, title, address and contact number of the reporter;
- (r) any other relevant details.

(4) Subject to sub-paragraph (5), a report containing as much of the information referred to in sub-paragraph (3) as is in his possession shall be despatched in a form specified by the Chief Executive, and by the quickest available means within 24 hours of the occurrence coming to the knowledge of the person making the report.

(5) Where any information referred to in sub-paragraph (3) is not in the possession of the person making a report under sub-paragraph (1) or (2), that person shall despatch the information in a form as

specified by the Chief Executive, and by the quickest available means within 24 hours of the information coming into his possession.

(6) Where any dangerous goods accident, dangerous goods incident or the finding of any undeclared or misdeclared munitions of war or dangerous goods in cargo or passenger's baggage on board any aircraft is reported to the Chief Executive under sub-paragraph (1) or (2), the Chief Executive shall cause an investigation to be made in such manner as he thinks necessary.

(7) For the purposes of any investigation under sub-paragraph (6), any authorised person carrying out the investigation may —

- (a) require such persons as he thinks necessary to answer any question, furnish any information or produce any document, paper or article, and retain any such document, paper or article until the completion of the investigation;
- (b) have access to and examine any consignment of goods; and
- (c) enter and inspect any place as he thinks necessary for the purposes of the investigation.

(8) In this paragraph, “undeclared or misdeclared munitions of war or dangerous goods” means munitions of war or dangerous goods which are not declared or inaccurately declared in the relevant dangerous goods transport document referred to in the Nineteenth Schedule.

[S 423/2010 wef 02/08/2010]

### **Exemption from the provisions of Technical Instructions**

**50H.**—(1) For the purposes of —

- (a) paragraphs 50C, 50D and 50E; and
- (b) paragraphs 1, 3, 4 and 7 of Part II, paragraph 1 of Part III and paragraphs 1 and 2 of Part IV of the Nineteenth Schedule,

the Chief Executive may exempt any person, including any operator or shipper, from any provision of the Technical Instructions referred to in any of those provisions, either absolutely or subject to such

conditions as he thinks fit if he is satisfied that the exemption is a matter of necessity and extreme urgency, other forms of transport are inappropriate or full compliance with the relevant provisions of the Technical Instructions is contrary to public interest, provided that in such instances an overall level of safety in transport which is at least equivalent to the level of safety provided for in the Technical Instructions is achieved.

*[S 570/2011 wef 04/10/2011]*

(2) An application for an exemption under sub-paragraph (1) shall be made in writing and shall include any documents or information as the Chief Executive may require.

(3) Any person who is granted an exemption under sub-paragraph (1) shall —

- (a) provide a certified true copy of the exemption granted to the operator of the aircraft on which the munitions of war or dangerous goods are to be carried or loaded; and
- (b) attach the relevant exemption documents to the dangerous goods transport document which accompanies the munitions of war or dangerous goods.

(4) An exemption granted under sub-paragraph (1) shall be valid for a period of one year or such shorter period as the Chief Executive may determine in any particular case.

*[S 423/2010 wef 02/08/2010]*

*[S 570/2011 wef 04/10/2011]*

### **No derogation from paragraph 50C**

**50I.** Paragraphs 50D, 50DA, 50E and 50G shall be additional to and not in derogation from paragraph 50C.

*[S 124/2012 wef 02/04/2012]*

## **PART VI**

### **AIRCRAFT NOISE**

#### **Control of aircraft noise**

**51.—(1)** In this Part, unless the context otherwise requires —

“aircraft” means any aircraft of a type listed under regulation 34(5) of the Air Navigation (91 — General Operating Rules) Regulations 2018;

[S 683/2018 wef 09/10/2018]

“Annex” means Volume I of Annex 16 to the Chicago Convention entitled “Environmental Protection”;

[S 729/2010 wef 01/12/2010]

“noise certificate” means a certificate issued or validated or other document approved by the competent authority of a State to the effect that the aircraft to which the certificate or other document relates complies with the applicable noise certification requirements in force in that State;

[S 278/2010 wef 15/05/2010]

“State of Design” means the State having jurisdiction over the organisation responsible for the type design of an aircraft;

[S 278/2010 wef 15/05/2010]

“Type Certificate” means a document issued by a State of Design to define the design of an aircraft, engine or propeller type and to certify that the design complies with the appropriate airworthiness requirements of that State.

[S 278/2010 wef 15/05/2010]

[S 683/2018 wef 09/10/2018]

(2) [Deleted by S 683/2018 wef 09/10/2018]

(3) [Deleted by S 683/2018 wef 09/10/2018]

(4) The Chief Executive may, subject to such conditions as he thinks fit, issue a noise certificate in respect of any Singapore aircraft if —

(a) the State of Design in respect of the aircraft type of that aircraft has included in the flight manual or the Type Certificate a statement that the aircraft type conforms with the relevant standards in respect of noise contained in the Annex;

(b) a noise certificate has been issued in respect of that aircraft by the State of Design; or

- (c) the Chief Executive is satisfied, on the basis of any relevant documents, that the aircraft conforms with the relevant standards in respect of noise contained in the Annex.

*[S 278/2010 wef 15/05/2010]*

(5) On or after 15th May 2010, any person who requires a noise certificate in respect of a Singapore aircraft shall make an application to the Chief Executive in writing and such application shall include or be accompanied by such particulars and evidence relating to the aircraft, including any document specified in sub-paragraph (4), as the Chief Executive may require to enable him to properly determine whether a noise certificate may be issued in respect of that aircraft.

*[S 278/2010 wef 15/05/2010]*

## PART VII

*[Deleted by S 683/2018 wef 09/10/2018]*

## PART VIIA

### EXHIBITIONS OF FLYING

*[S 61/93 wef 19/03/1993]*

#### **Exhibitions of flying**

**55A.**—(1) No person shall act as the organiser of an exhibition of flying (referred to in this paragraph as the exhibition organiser) at an organised event which event the exhibition organiser reasonably believes is likely to be attended by more than 500 persons and which event consists wholly or partly of an exhibition of flying unless at the time at which such an exhibition of flying commences the exhibition organiser has obtained the permission in writing of the Chief Executive under sub-paragraph (4) for the exhibition of flying and complies with any conditions therein specified:

Provided that the permission in writing of the Chief Executive under sub-paragraph (4) shall not be required for an exhibition of flying at an organised event if the exhibition organiser could not reasonably

foresee 7 days before the intended date of the event that it would be likely to be attended by more than 500 persons.

*[S 61/93 wef 19/03/1993]*

*[S 278/2010 wef 15/05/2010]*

(2)(a) The pilot-in-command of an aircraft intending to participate in an exhibition of flying for which a permission is required by virtue of sub-paragraph (1) shall take all reasonable steps to satisfy himself before he participates that —

- (i) the exhibition organiser has been granted such permission;
- (ii) the flight can comply with any relevant conditions subject to which that permission may have been granted; and
- (iii) the pilot has been granted a display authorisation appropriate to the intended flight.

*[S 423/2010 wef 02/08/2010]*

(b) The pilot-in-command of an aircraft participating in an exhibition of flying for which a permission required by virtue of sub-paragraph (1) has been granted shall comply with any conditions subject to which that permission has been granted.

*[S 423/2010 wef 02/08/2010]*

(c) No person shall act as pilot of an aircraft participating in an exhibition of flying for which a permission is required by virtue of sub-paragraph (1) unless he holds a display authorisation appropriate to the intended flight granted to him by the Chief Executive or such person as the Chief Executive may authorise to make such grant and he complies with any conditions thereof.

*[S 278/2010 wef 15/05/2010]*

(3) The exhibition organiser shall not permit any person to act as pilot of an aircraft which participates in an exhibition of flying for which a permission is required by virtue of sub-paragraph (1) unless such person holds a display authorisation appropriate to the intended flight granted by the Chief Executive or such person as the Chief Executive may authorise to make such grant.

*[S 278/2010 wef 15/05/2010]*

(4) The Chief Executive shall grant to any person applying therefor a permission required by virtue of sub-paragraph (1) if he is satisfied that that person is a fit and competent person, having regard in particular to his previous conduct and experience, his organisation, staffing and other arrangements, to safely organise the proposed exhibition of flying. The permission may be granted subject to such conditions, which may include conditions in respect of military aircraft, as the Chief Executive thinks fit and shall remain in force for the period specified in the permission.

*[S 278/2010 wef 15/05/2010]*

*[S 683/2018 wef 09/10/2018]*

(5) The Chief Executive or such person authorised by the Chief Executive under sub-paragraph (2)(c) shall, for the purposes of this paragraph, either unconditionally or subject to such conditions as he thinks fit —

- (a) grant an authorisation permitting the holder to act as pilot of an aircraft taking part in an exhibition of flying in respect of which a permission is required by virtue of sub-paragraph (1) upon being satisfied that the applicant is a fit person to hold the authorisation and is qualified by reason of his knowledge, experience, competence, skill, physical and mental fitness to fly in accordance therewith and for that purpose the applicant shall furnish such evidence and undergo such examinations and tests as the Chief Executive or such person authorised under sub-paragraph (2)(c) may require of him;

*[S 278/2010 wef 15/05/2010]*

- (b) conduct such examinations or tests as he may specify; and  
(c) approve a person as qualified to furnish reports to him and accept such reports.

(6) Sub-paragraph (1) does not apply to —

- (a) an exhibition organiser at an organised event that is located at —  
(i) an aerodrome; or

- (ii) any other premises,  
in the occupation or under the control of the military authorities; or
- (b) an exhibition of flying organised by the Republic of Singapore Air Force and comprising exclusively military aircraft.

[S 589/2016 wef 18/11/2016]

(7) The exhibition organiser shall not permit any military aircraft to participate in an exhibition of flying for which a permission is required by virtue of sub-paragraph (1) unless he complies with any conditions specified in respect of military aircraft subject to which such permission may have been granted.

[S 49/92 wef 01/02/1992]

## PART VIII

### DOCUMENTS AND RECORDS

- 56. [Deleted by S 683/2018 wef 09/10/2018]
- 57. [Deleted by S 683/2018 wef 09/10/2018]
- 58. [Deleted by S 683/2018 wef 09/10/2018]
- 58A. [Deleted by S 683/2018 wef 09/10/2018]

#### **Preservation of documents, etc.**

59. A person required by this Order to preserve any document by reason of his being the operator of an aircraft shall, if he ceases to be the operator of the aircraft, continue to preserve the document or record as if he had not ceased to be the operator, and in the event of his death the duty to preserve the document or record shall fall upon his personal representative:

Provided that if —

- (a) another person becomes the operator of the aircraft and it remains registered in Singapore he or his personal representative shall deliver to that other person upon demand the certificates of maintenance review and release



to service, the log books and the weight schedule and any record made by a flight recorder and preserved in accordance with this Order which are in force or required to be preserved in respect of that aircraft;

- (b) an engine or variable pitch propeller is removed from the aircraft and installed in another aircraft operated by another person and registered in Singapore he or his personal representative shall deliver to that other person upon demand the log book relating to that engine or propeller; and
- (c) any person in respect of whom a record has been kept by him in accordance with paragraph 179(3)(f) of the Air Navigation (121 — Commercial Air Transport by Large Aeroplanes) Regulations 2018 or paragraph 172(3)(f) of the Air Navigation (135 — Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018, becomes a member of the flight crew of a public transport aircraft registered in Singapore and operated by another person he or his personal representative shall deliver those records to that other person upon demand,

*[S 683/2018 wef 09/10/2018]*

and it shall be the duty of that other person to deal with the document or record delivered to him as if he were the first-mentioned operator.

**60.** *[Deleted by S 683/2018 wef 09/10/2018]*

### **Offences in relation to documents and records**

**61.—(1)** A person shall not with intent to deceive —

- (a) use any certificate, licence, approval, permission, permit, exemption, authorisation or other document issued or required by or under this Order which has been forged, altered, revoked or suspended or to which he is not entitled;

*[S 61/93 wef 19/3/1993]*

*[S 617/2012 wef 17/12/2012]*

- (b) lend any certificate, licence, approval, permission, permit, exemption, authorisation or other document issued or

required by or under this Order to or allow it to be used by any other person; or

*[S 61/93 wef 19/03/1993]*

*[S 617/2012 wef 17/12/2012]*

- (c) make any false representation for the purpose of procuring for himself or any other person the grant, issue, renewal or variation of any such certificate, licence, approval, permission, permit, exemption, authorisation or any other document,

*[S 617/2012 wef 17/12/2012]*

and in this paragraph a reference to a certificate, licence, approval, permission, permit, exemption, authorisation or other document includes a copy or purported copy thereof.

*[S 61/93 wef 19/03/1993]*

*[S 617/2012 wef 17/12/2012]*

(2) A person shall not wilfully mutilate, alter or render illegible any log book or other record required by or under this Order to be maintained or any entry made therein, or knowingly make, or procure or assist in the making of, any false entry in or material omission from any such log book or record or destroy any such log book or record during the period for which it is required under this Order to be preserved.

(3) All entries made in writing in any log book and record referred to in sub-paragraph (2) shall be in ink or indelible pencil.

(4) A person shall not wilfully or negligently make in a load sheet any entry which is incorrect in any material particular, or any material omission from such a load sheet.

(5) A person shall not purport to issue any certificate for the purposes of this Order or any regulations made or requirements notified thereunder unless he is authorised to do so under this Order.

(6) A person shall not issue any such certificate as aforesaid unless he has satisfied himself that all statements in the certificate are correct.

## PART IX

## CONTROL OF AIR TRAFFIC

**Rules of the Air**

**62.**—(1) The Rules of the Air for the purposes of this paragraph shall consist of —

- (a) the provisions of the rules of the air in Annex 2 to the Chicago Convention as set out in Part I of the Eleventh Schedule (except 3.8.1 of Chapter 3 and 1.1, 1.2 and 1.3 of Appendix 2 thereof); and
- (b) the provisions as set out in Part II of that Schedule.

(2) Unless otherwise provided in Part II of the Eleventh Schedule, every person and every aircraft shall comply with the Rules of the Air as may be applicable to that person or aircraft in the circumstances of the case.

*[S 570/2011 wef 04/10/2011]*

(3) Subject to sub-paragraph (4), it shall be an offence to contravene, to permit the contravention of, or to fail to comply with, the Rules of the Air.

(4) It shall be lawful for the Rules of the Air to be departed from —

- (a) in circumstances that render such departure absolutely necessary in the interests of safety; or
- (b) to the extent necessary for complying with the law of any country other than Singapore within which the aircraft then is.

(5) If any departure from the Rules of the Air is made in accordance with sub-paragraph (4), the pilot-in-command of the aircraft shall cause written particulars of the departure, and of the circumstances giving rise to it, to be given within 10 days thereafter to the competent authority of the country in whose territory the departure was made or if the departure was made over the high seas, to the Chief Executive.

(6) Nothing in the Rules of the Air shall exonerate any person from the consequence of any neglect in the use of lights or signals or of the

neglect of any precautions required by ordinary aviation practice or by the special circumstances of the case.

(7) The Chief Executive may for the purpose of promoting the safety of the aircraft make regulations as to special signals and other communications to be made by or on an aircraft, as to the course on which and the height at which an aircraft shall fly and as to any other precautions to be observed in relation to the navigation and control of aircraft which the Chief Executive may consider expedient for the purpose aforesaid and no aircraft shall fly in contravention of any such regulations.

*[S 278/2010 wef 15/05/2010]*

### **Licensing of air traffic controllers**

**62A.**—(1) Subject to sub-paragraph (5), no person shall —

- (a) act as an air traffic controller;
- (b) hold himself out, whether by use of radio call sign or otherwise, as an air traffic controller; or
- (c) supervise or train any person to act as an air traffic controller,

unless he holds an air traffic controller licence granted or renewed under this paragraph and the appropriate rating is included in such licence.

*[S 423/2010 wef 02/08/2010]*

(2) The Authority may, subject to such conditions as the Authority thinks fit, grant or renew an air traffic controller licence upon being satisfied that the applicant —

- (a) is 21 years of age or older;
- (b) has passed all relevant training courses, examinations or tests as the Authority may require under sub-paragraph (3);
- (c) possesses the necessary knowledge, skill and experience, set out in the manual published under sub-paragraph (3B), to act as an air traffic controller; and

- (d) fulfils the medical examination and medical fitness requirements specified in the Fourteenth Schedule.

*[S 589/2016 wef 18/11/2016]*

(3) For the purpose of sub-paragraph (2)(b), the Authority may require an applicant to undergo such training courses, examinations or tests as may be relevant for acting as an air traffic controller.

*[S 589/2016 wef 18/11/2016]*

(3A) Without prejudice to any other provision of this Order, the Authority may, for the purpose of sub-paragraph (3), either absolutely or subject to such conditions as the Authority thinks fit —

- (a) approve any course of training or instruction;
- (b) authorise a person to conduct such examinations or tests as the Authority may specify;
- (c) approve a person to provide any course of training or instruction approved under sub-paragraph (a); and
- (d) approve the use of a simulator for the purposes of air traffic control training.

*[S 299/2009 wef 30/06/2009]*

*[S 423/2010 wef 02/08/2010]*

*[S 589/2016 wef 18/11/2016]*

(3B) The Authority may, in such manner as it thinks fit, publish a manual called the “Manual of Standards — Licensing of Air Traffic Control Personnel”, containing the standards relating to the licensing requirements applicable to air traffic controllers that the Authority determines to be applicable in Singapore.

*[S 589/2016 wef 18/11/2016]*

(3BA) The Authority may, in such manner as it thinks fit, publish a manual called the “Manual of Standards — Air Traffic Control Training Organisation”, containing the standards relating to the training of air traffic controllers that the Authority determines to be applicable in Singapore.

*[S 589/2016 wef 18/11/2016]*

(3C) The holder of an air traffic controller licence shall comply with the applicable standards specified in the Manual of Standards —

Licensing of Air Traffic Control Personnel and shall not at any time contravene any condition of the air traffic controller licence.

*[S 299/2009 wef 30/06/2009]*

(3D) A person who is approved to provide any course of training or instruction under sub-paragraph (3A) shall comply with the applicable standards specified in the Manual of Standards — Air Traffic Control Training Organisation and shall not at any time contravene any condition of the approval granted to him.

*[S 299/2009 wef 30/06/2009]*

*[S 589/2016 wef 18/11/2016]*

(4) *[Deleted by S 589/2016 wef 18/11/2016]*

(5) Notwithstanding sub-paragraph (1), a person who is undergoing on-the-job training to act as an air traffic controller shall be entitled to hold himself out, whether by use of radio call sign or otherwise, as an air traffic controller if he is directly supervised by a person who holds an air traffic controller licence with the appropriate rating.

*[S 423/2010 wef 02/08/2010]*

(6) Paragraphs 62E, 62F and 62G shall apply to any person referred to in sub-paragraph (5) as they apply to a holder of an air traffic controller licence.

(7) In sub-paragraphs (1) and (5) and paragraph 62E(1), (2) and (4), “rating” means an air traffic controller rating specified in the Seventeenth Schedule.

*[S 325/2000 wef 01/08/2000]*

*[S 423/2010 wef 02/08/2010]*

### **Signature required**

**62B.** An air traffic controller licence shall be signed by the successful applicant upon the grant or renewal of the licence under paragraph 62A(4) in the presence of a person authorised by the Chief Executive.

*[S 325/2000 wef 01/08/2000]*

*[S 423/2010 wef 02/08/2010]*

**Renewal and duration of air traffic controller licence**

**62C.** An air traffic controller licence may be granted or renewed for a period of —

- (a) 48 months from the date the licence is granted or renewed, if the applicant is below 40 years of age on that date;
- (b) 24 months from the date the licence is granted or renewed, if the applicant is 40 years of age or more but less than 50 years of age on that date; or
- (c) 12 months from the date the licence is granted or renewed, if the applicant is 50 years of age or more on that date.

*[S 487/2006 wef 11/08/2006]*

**Replacement of air traffic controller licence**

**62D.**—(1) Where an air traffic controller licence has been lost or defaced before its expiry, the Chief Executive may, on application, issue a replacement air traffic controller licence.

*[S 423/2010 wef 02/08/2010]*

(2) Upon issuance of the replacement licence, the holder of the air traffic controller licence to whom the replacement licence is issued shall sign the replacement licence in the presence of a person authorised by the Chief Executive.

*[S 325/2000 wef 01/08/2000]*

*[S 423/2010 wef 02/08/2010]*

**Incapacity of air traffic controllers**

**62E.**—(1) A holder of an air traffic controller licence who —

- (a) knows or has reason to believe that he is unfit or is suffering from any personal injury which affects his capacity to act as an air traffic controller in accordance with the rating in his licence;

*[S 423/2010 wef 02/08/2010]*

- (b) suffers from any illness which affects his capacity to act as an air traffic controller in accordance with the rating in his licence throughout a period of more than 20 days;

[S 423/2010 wef 02/08/2010]

- (c) knows or has reason to believe that she is pregnant;
- (d) is prescribed any medication upon being diagnosed with, or any new medication while receiving or undergoing treatment for, any long-term or chronic disease or condition; or

[S 178/2019 wef 31/03/2019]

- (e) has received any medical treatment provided by a hospital, or a person who is qualified and licensed to practise as a specialist in any branch of medicine, in Singapore or elsewhere,

[S 178/2019 wef 31/03/2019]

shall —

- (i) inform the Chief Executive in writing —
- (A) as soon as possible, in the case of any matter in sub-paragraph (a), (c), (d), or (e); or
- (B) as soon as possible after a period of 20 days has elapsed, in the case of any illness in sub-paragraph (b); and

[S 178/2019 wef 31/03/2019]

- (ii) not exercise the privileges of the licence and related ratings until he has satisfied the medical assessor that his medical fitness has been restored to the standard required in paragraph 7 of the Fourteenth Schedule.

[S 487/2006 wef 11/08/2006]

[S 617/2012 wef 17/12/2012]

(2) A holder of an air traffic controller licence mentioned in sub-paragraph (1)(a), (b), (d) or (e) must not act as an air traffic controller in accordance with the rating in his licence unless the Chief Executive —



- (a) is satisfied, after the holder undergoes such medical examination as the Chief Executive may require, that the holder is fit to resume exercising the privileges of the holder's licence and related ratings; or
- (b) otherwise determines that the holder may resume exercising the privileges of the holder's licence and related ratings without undergoing a medical examination.

*[S 178/2019 wef 31/03/2019]*

(3) The Chief Executive may require the holder of an air traffic controller licence referred to in sub-paragraph (1)(c) to undergo such medical examination as may be determined by the Chief Executive.

*[S 423/2010 wef 02/08/2010]*

(4) A holder of an air traffic controller licence who has been required to undergo the medical examination referred to in sub-paragraph (3) shall not act as an air traffic controller in accordance with the rating in her licence if she is certified as unfit to act as an air traffic controller.

*[S 325/2000 wef 01/08/2000]*

*[S 423/2010 wef 02/08/2010]*

### **Fatigue of air traffic controller**

**62F.** A holder of an air traffic controller licence shall not act as an air traffic controller if he knows or has reason to believe that he is suffering from fatigue which may render him unable to act as an air traffic controller in a safe and proper manner.

*[S 423/2010 wef 02/08/2010]*

### **Prohibition of use of psychoactive substances**

**62G.**—(1) A holder of an air traffic controller licence shall not act as an air traffic controller if he is under the influence of any psychoactive substance which may render him unable to carry out his duties as an air traffic controller in a safe and proper manner.

*[S 423/2010 wef 02/08/2010]*

(2) A holder of an air traffic controller licence shall not at any time engage in the problematic use of psychoactive substances.

*[S 325/2000 wef 21/08/2000]*

### **Paragraphs 62A to 62G not to apply to members of Armed Forces**

**62H.** Paragraphs 62A to 62G shall not apply to any member of the Armed Forces who acts as an air traffic controller in respect of any aircraft under any circumstance.

*[S 325/2000 wef 01/08/2000]*

*[S 423/2010 wef 02/08/2010]*

### **Power to prohibit or restrict flying**

**63.—**(1) Where the Minister makes an order under section 3(2)(I) of the Act, the Chief Executive may make regulations supplemental to such order restricting or imposing conditions on flight, either generally or in relation to any class of aircraft, over any area or along any route specified in such order and an aircraft shall not fly in contravention of such regulations.

*[S 278/2010 wef 15/05/2010]*

(2) If the pilot-in-command of an aircraft becomes aware that the aircraft is flying in contravention of any such regulations he shall forthwith cause a signal of distress to be made by radio or by one of the prescribed visual signals, and shall (unless otherwise instructed by the appropriate air traffic control unit or by a commissioned officer of the Armed Forces) cause the aircraft to land at the aerodrome, being an aerodrome suitable for that purpose, which it can reach by flying to the least possible extent over the area to which the regulations relate. The aircraft shall not begin to descend while over such area.

*[S 423/2010 wef 02/08/2010]*

### **Kites and parasails**

**64.—**(1) Except where expressly provided in paragraph 64F, a person shall not fly or operate a kite or parasail at any altitude in any area that is within 5 kilometres of any aerodrome and not a permitted area designated under sub-paragraph (2) unless —

- (a) the person has in force a permit granted under sub-paragraph (4) authorising him to do so; and
- (b) the person flies or operates the kite or parasail in accordance with the conditions of that permit and the requirements of paragraph 64D.

(2) The Chief Executive may designate one or more areas within 5 kilometres of any aerodrome as a permitted area for the flying or operation of a kite or parasail, subject to such conditions as he may impose.

(3) Except where expressly provided in paragraph 64F, a person shall not fly or operate a kite or parasail beyond 5 kilometres of any aerodrome —

- (a) at an altitude higher than 200 feet above mean sea level if within 10 kilometres of Paya Lebar aerodrome or Tengah aerodrome and within one kilometre of the respective flight funnels to these aerodromes; or
- (b) at an altitude higher than 500 feet above mean sea level in any other place,

unless the person has in force a permit granted under sub-paragraph (4) authorising him to do so, and he flies or operates the kite or parasail in accordance with the conditions of that permit and the requirements of paragraph 64D.

(3A) Except where expressly provided in paragraph 64F, a person must not fly or operate a kite or parasail within the boundaries of any danger area or restricted area unless —

- (a) the person has in force a permit granted under sub-paragraph (4) authorising him to do so; and
- (b) the person flies or operates the kite or parasail in accordance with the conditions of that permit and the requirements of paragraph 64D(1)(b).

*[S 589/2016 wef 18/11/2016]*

(4) The Chief Executive may grant a written permit in such form or manner as he may determine, and subject to such conditions as he thinks fit.

(5) An application for a permit granted under sub-paragraph (4) must be submitted to the Chief Executive, in the form and manner required by the Chief Executive, no later than 7 working days before the date on which the activity in sub-paragraph (1), (3) or (3A) is intended to be carried out.

*[S 589/2016 wef 18/11/2016]*

(6) A permit granted under sub-paragraph (4) shall be valid for such period as may be specified therein.

(7) For the purposes of this paragraph —

- (a) aerodrome shall include a military aerodrome; and
- (b) parasailing shall include kite surfing.

*[S 617/2012 wef 17/12/2012]*

### **Captive balloons**

**64A.**—(1) Except where expressly provided in paragraph 64F, a person shall not fly or operate a captive balloon that exceeds 3 metres in any linear dimension at any altitude anywhere unless —

- (a) the person has in force a permit granted under sub-paragraph (4) authorising him to do so; and
- (b) the person flies or operates the captive balloon in accordance with the conditions of that permit and the requirements of sub-paragraph (7) and paragraph 64D.

(2) Except where expressly provided in paragraph 64F, a person shall not fly or operate a captive balloon that is 3 metres or shorter in any linear dimension at any altitude within one kilometre of the respective flight funnels to any aerodrome unless —

- (a) the person has in force a permit granted under sub-paragraph (4) authorising him to do so; and
- (b) the person flies or operates the captive balloon in accordance with the conditions of that permit and the requirements of sub-paragraph (7) and paragraph 64D.

(3) Except where expressly provided in paragraph 64F, a person shall not fly or operate a captive balloon that is 3 metres or shorter in

any linear dimension outside of one kilometre of the respective flight funnels to any aerodrome —

- (a) at an altitude higher than 130 feet above mean sea level if within 5 kilometres of any aerodrome; or
- (b) at an altitude higher than 290 feet above mean sea level in any other place,

unless the person has in force a permit granted under sub-paragraph (4) authorising him to do so, and he flies or operates the captive balloon in accordance with the conditions of that permit and the requirements of sub-paragraph (7) and paragraph 64D.

(3A) Except where expressly provided in paragraph 64F, a person must not fly or operate a captive balloon within the boundaries of any danger area or restricted area unless —

- (a) the person has in force a permit granted under sub-paragraph (4) authorising him to do so; and
- (b) the person flies or operates the captive balloon in accordance with the conditions of that permit and the requirements of sub-paragraph (7) and paragraph 64D(1)(b).

*[S 589/2016 wef 18/11/2016]*

(4) The Chief Executive may grant a written permit in such form or manner as he may determine, and subject to such conditions as he thinks fit.

(5) An application for a permit granted under sub-paragraph (4) must be submitted to the Chief Executive, in the form and manner required by the Chief Executive, no later than 7 working days before the date on which the activity in sub-paragraph (1), (2), (3) or (3A) is intended to be carried out.

*[S 589/2016 wef 18/11/2016]*

(6) A permit granted under sub-paragraph (4) shall be valid for such period as may be specified therein.

(7) A person shall not fly or operate a captive balloon unless the captive balloon —

- (a) is securely tethered; and
  - (b) is attended to at all times where that captive balloon is not fitted with a device which ensures its automatic deflation if it breaks free of its tether.
- (8) For the purposes of this paragraph, aerodrome shall include a military aerodrome.

[S 617/2012 wef 17/12/2012]

### Free flight aerial objects

**64B.**—(1) Except where expressly provided in paragraph 64F, a person shall not cause or permit the release of a free flight aerial object within 5 kilometres of any aerodrome unless —

- (a) the person has in force a permit granted under sub-paragraph (3) authorising him to do so; and
  - (b) the person causes or permits the release of the free flight aerial object in accordance with the conditions of that permit and the requirements of paragraph 64D.
- (2) Except where expressly provided in paragraph 64F, a person shall not, beyond 5 kilometres of any aerodrome, cause or permit the release of —
- (a) a balloon 2 metres or longer in any linear dimension including any object attached to the balloon;
  - (b) a balloon singly, collectively or in a cluster where the balloon or cluster of balloons may cluster with other balloons (regardless of whether such other balloons are released by that person) resulting in a cluster (including any object attached to any of the balloons) measuring 2 metres or longer in any linear dimension; or
  - (c) a free flight aerial object (other than a balloon) which is capable of rising more than 200 feet above mean sea level,
- unless the person has in force a permit granted under sub-paragraph (3) authorising him to do so, and he causes or permits the release of the balloon in accordance with the conditions of that permit and the requirements of paragraph 64D.

(2A) Except where expressly provided in paragraph 64F, a person must not cause or permit the release of a free flight aerial object within the boundaries of any danger area or restricted area unless —

- (a) the person has in force a permit granted under sub-paragraph (3) authorising him to do so; and
- (b) the person causes or permits the release of the free flight aerial object in accordance with the conditions of that permit and the requirements of paragraph 64D(2)(b) and (c).

*[S 589/2016 wef 18/11/2016]*

(3) The Chief Executive may grant a written permit in such form or manner as he may determine, and subject to such conditions as he thinks fit.

(4) An application for a permit granted under sub-paragraph (3) must be submitted to the Chief Executive, in the form and manner required by the Chief Executive, no later than 7 working days before the date on which the activity in sub-paragraph (1), (2) or (2A) is intended to be carried out.

*[S 589/2016 wef 18/11/2016]*

(5) A permit granted under sub-paragraph (3) shall be valid for such period as may be specified therein.

*[S 617/2012 wef 17/12/2012]*

**64C.** *[Deleted by S 351/2015 wef 02/06/2015]*

### **Prohibition of activities within certain areas and of hazardous aerial activities**

**64D.**—(1) Despite paragraphs 64 and 64A, a person must not fly or operate a kite, parasail or captive balloon —

- (a) within the boundaries of any prohibited area; or

*[S 589/2016 wef 18/11/2016]*

- (b) outside any area in sub-paragraph (a) in a manner likely to endanger the safety of any person, aircraft or property.

*[S 351/2015 wef 02/06/2015]*

(2) Notwithstanding paragraph 64B, a person shall not cause or permit the release of a free flight aerial object —

(a) within the boundaries of any prohibited area;

*[S 589/2016 wef 18/11/2016]*

(b) in a manner which is likely to endanger the safety of any person, aircraft or property; or

(c) anywhere in Singapore during the operating hours of any military aerodrome.

*[S 617/2012 wef 17/12/2012]*

### **Notification in cases not requiring permit**

**64E.**—(1) Where a permit is not required under any provision in paragraphs 64A and 64B (other than for any reason under paragraph 64F) to fly or operate a captive balloon or to release a free flight aerial object, a person who intends to carry out any such activity shall notify the Chief Executive, in the form and manner required by the Chief Executive, no later than 7 working days before the date on which the activity is intended to be carried out.

*[S 351/2015 wef 02/06/2015]*

*[S 589/2016 wef 18/11/2016]*

(2) Sub-paragraph (1) shall not apply to the release of 20 or fewer balloons on a single occasion —

(a) where each balloon is 30 centimetres or shorter in any linear dimension including any object attached to the balloon; and

(b) the release of such balloons do not result in a cluster (including any object attached to any of the balloons) measuring 2 metres or longer in any linear dimension.

*[S 617/2012 wef 17/12/2012]*



**Paragraphs 64 to 64E not to apply in certain circumstances**

**64F.** Paragraphs 64 to 64E shall not apply to —

- (a) the flying or operating of a kite, parasail or captive balloon, or the releasing of a free flight aerial object in an indoor place or area; and

*[S 351/2015 wef 02/06/2015]*

- (b) the use of a free flight aerial object for public transport.

*[S 617/2012 wef 17/12/2012]*

*[S 351/2015 wef 02/06/2015]*

**Power to demand names and addresses, etc.**

**64G.**—(1) An authorised person may require a person whom he has reasonable grounds to suspect is just about to contravene, has just contravened or is contravening any provision in paragraphs 64 to 64E, to furnish his name, address or such other proof of identity on demand.

(2) Any person who —

- (a) refuses or, without reasonable excuse, fails to comply with sub-paragraph (1);
- (b) in furnishing any information so required under sub-paragraph (1) makes a statement which he knows to be false, or recklessly makes a statement which is false; or
- (c) wilfully obstructs or impedes any authorised person acting in the exercise of a power conferred on him by or under this paragraph,

shall be guilty of an offence.

*[S 617/2012 wef 17/12/2012]*

**Offences**

**64H.** Any person who —

- (a) fails to comply with any condition in a permit granted to him under paragraphs 64, 64A and 64B;

*[S 351/2015 wef 02/06/2015]*

- (b) fails to comply with any condition imposed under paragraph 64(2) for the flying or operation of a kite or parasail in a permitted area within 5 kilometres of any aerodrome; or
- (c) contravenes any provision in paragraphs 64 to 64E,
- shall be guilty of an offence.

*[S 617/2012 wef 17/12/2012]*

## Definitions

**64I.** In paragraphs 64 to 64H, unless the context otherwise requires —

*[Deleted by S 351/2015 wef 02/06/2015]*

“flight funnel” means an envelope of airspace within and around the path that may be taken by an aircraft for taking off from and landing at any aerodrome;

*[Deleted by S 351/2015 wef 02/06/2015]*

“operating hours”, in relation to a military aerodrome, means Mondays to Fridays from 7 a.m. to 7 p.m. and Saturdays from 7 a.m. to 1 p.m.;

*[Deleted by S 351/2015 wef 02/06/2015]*

*[Deleted by S 351/2015 wef 02/06/2015]*

## PART X

### AERODROMES, AERONAUTICAL LIGHTS AND DANGEROUS LIGHTS

**65.** *[Deleted by S 683/2018 wef 09/10/2018]*

#### Use of Government aerodromes

**66.** The Minister may cause to be notified, subject to such conditions as he thinks fit, any Government aerodrome as an aerodrome available for take-off and landing by aircraft.

**Aerodrome certificate**

**67.**—(1) No person shall operate an aerodrome in Singapore for the take-off and landing of aircraft engaged in flights for the purpose of public transport or instruction in flying unless he is the holder of an aerodrome certificate granted under this Order.

(2) An applicant for the grant or renewal of an aerodrome certificate shall submit —

- (a) an application in the form set out in the Manual of Aerodrome Standards; and
- (b) an aerodrome manual for the aerodrome for which the application is made.

*[S 299/2009 wef 30/06/2009]*

(3) The aerodrome manual referred to in sub-paragraph (2)(b) shall contain —

- (a) information and instructions relating to the matters specified in the Eighteenth Schedule; and
- (b) such other information and instructions as may be necessary to enable the aerodrome operating staff to perform their duties.

(4) The Chief Executive may grant or renew an aerodrome certificate to an applicant if he is satisfied that —

- (a) the applicant is competent to operate and maintain his aerodrome properly, having regard to his previous conduct and experience, equipment, organisation, staffing, maintenance and other arrangements;
- (b) the aerodrome manual prepared for the applicant's aerodrome and submitted with his application in accordance with sub-paragraphs (2) and (3) contains accurate information and complies with the requirements specified in the Eighteenth Schedule;
- (c) the applicant's aerodrome facilities, equipment and services comply with the standards specified in the Manual of Aerodrome Standards;

- (d) the applicant's aerodrome operating procedures make satisfactory provision for the safety of aircraft; and
- (e) for the purpose of any application made on or after 24th November 2005, an acceptable safety management system is in place at the applicant's aerodrome.

*[S 299/2009 wef 30/06/2009]*

*[S 423/2010 wef 02/08/2010]*

(5) If the Chief Executive refuses to grant or renew an aerodrome certificate to an applicant, the Chief Executive shall, within 14 days of the refusal, give the applicant a written notice of the refusal, stating the reasons for the refusal.

*[S 299/2009 wef 30/06/2009]*

*[S 423/2010 wef 02/08/2010]*

(6) The Chief Executive may, upon payment of the fee specified in paragraph 21(1) of the Twelfth Schedule, grant or may renew an aerodrome certificate subject to such conditions as he thinks fit.

*[S 299/2009 wef 30/06/2009]*

*[S 423/2010 wef 02/08/2010]*

(6A) After affording the aerodrome operator concerned reasonable notice, the Chief Executive may delete, or vary and substitute, a condition of an aerodrome certificate, or add a condition to an aerodrome certificate in relation to —

- (a) the boundaries of the aerodrome named in the certificate, and the position of its taxiways, runways and other physical characteristics and infrastructure of the aerodrome;
- (b) the category of operations of the aerodrome; or
- (c) any other matter made necessary by significant changes in the physical infrastructure or operations of the aerodrome.

*[S 181/2016 wef 01/05/2016]*

(7) If the Chief Executive grants or renews an aerodrome certificate subject to any condition, or modifies the conditions of an aerodrome certificate under sub-paragraph (6A) —

- (a) the condition or modified condition (as the case may be) must be set out in an endorsement on the aerodrome certificate or otherwise notified to the applicant or aerodrome operator (as the case may be) in writing; and
- (b) the reasons for the condition or modified condition (as the case may be) must be provided in writing to the applicant or aerodrome operator.

*[S 181/2016 wef 01/05/2016]*

(8) The Chief Executive may suspend or cancel an aerodrome certificate if the applicable annual fee specified in paragraph 21(2) of the Twelfth Schedule is not paid within the time required by the Chief Executive, or if there are reasonable grounds for believing that —

- (a) a condition to which the certificate is subject has been breached; or
- (b) the aerodrome facilities, equipment, operations or maintenance are not of the standard necessary in the interests of the safety of air navigation.

*[S 299/2009 wef 30/06/2009]*

*[S 423/2010 wef 02/08/2010]*

(9) Before suspending or cancelling an aerodrome certificate under sub-paragraph (8), the Chief Executive shall —

- (a) give the aerodrome operator holding the certificate a notice which —
  - (i) sets out the facts and circumstances that, in the opinion of the Chief Executive, justify the suspension or cancellation of that certificate; and
  - (ii) invites the aerodrome operator to show cause, in writing, within a reasonable period stated in the notice, as to why that certificate should not be suspended or cancelled; and
- (b) take into account any reason that the aerodrome operator may give under sub-paragraph (a)(ii).

*[S 423/2010 wef 02/08/2010]*

(10) A suspension or cancellation of an aerodrome certificate shall take effect from the date specified in the notice of suspension or cancellation.

(11) An aerodrome certificate granted or renewed on or after 30th June 2009 shall be valid for a period of 5 years after the date of the grant or renewal, as the case may be, unless it is earlier suspended or cancelled in accordance with sub-paragraph (8).

[S 299/2009 wef 30/06/2009]

(12) An aerodrome certificate shall not be transferable to any person without the prior consent in writing of the Chief Executive, and any purported transfer of an aerodrome certificate in contravention of this sub-paragraph shall be void and of no effect.

[S 299/2009 wef 30/06/2009]

[S 423/2010 wef 02/08/2010]

(13) [*Deleted by S 181/2016 wef 01/05/2016*]

### **Aerodrome manual**

**67A.**—(1) An aerodrome operator shall —

(a) produce an aerodrome manual for his aerodrome and provide the Chief Executive with a copy thereof which is kept complete and current;

[S 423/2010 wef 02/08/2010]

(b) keep at least one complete and current copy of the aerodrome manual at the aerodrome and, if the aerodrome is not his principal place of business, keep another such copy of the aerodrome manual at his principal place of business;

(c) make the copy of the aerodrome manual referred to in sub-paragraph (b) available for inspection by the Chief Executive or any authorised person;

[S 423/2010 wef 02/08/2010]

(d) maintain the aerodrome manual and make such amendments as may be necessary to maintain the accuracy of the information in the aerodrome manual and to keep its contents up to date; and

- (e) make such amendments or additions to the aerodrome manual as the Chief Executive may require for —
  - (i) maintaining the accuracy of the aerodrome manual;
  - (ii) ensuring the safe and efficient operation of aircraft at the aerodrome; or
  - (iii) ensuring the safety of air navigation.

*[S 423/2010 wef 02/08/2010]*

(2) An aerodrome operator shall —

- (a) make available to each member of the aerodrome operating staff a copy of the aerodrome manual or a copy of every part of the aerodrome manual which is relevant to the member's duties and shall ensure that such copy is kept up to date; and
- (b) take all reasonable steps to ensure that each member of the aerodrome operating staff —
  - (i) is aware of the contents of every part of the aerodrome manual which is relevant to his duties; and
  - (ii) undertakes his duties in conformity with the relevant provisions of the manual.

(3) In this paragraph, “aerodrome operating staff” means all persons, whether or not employed by the aerodrome operator, who in the course of their duties are —

- (a) concerned with ensuring that the aerodrome is safe for use by aircraft; or
- (b) required to have access to the aerodrome manoeuvring area or apron.

*[S 440/2003 wef 15/09/2003]*

### **Manual of Aerodrome Standards**

**67B.** The Chief Executive may, in such manner as he thinks fit, publish a Manual of Aerodrome Standards containing such standards,

recommended practices and guidance material on aerodromes as he may determine to be applicable in Singapore.

*[S 440/2003 wef 15/09/2003]*

*[S 423/2010 wef 02/08/2010]*

### **Compliance with Manual of Aerodrome Standards and conditions of aerodrome certificate**

**67C.** An aerodrome operator —

- (a) shall comply with the applicable standards specified in the Manual of Aerodrome Standards; and
- (b) shall not at any time contravene, or cause or permit the contravention of, any condition of the aerodrome certificate.

*[S 440/2003 wef 15/09/2003]*

### **Competence of operational and maintenance personnel**

**67D.**—(1) An aerodrome operator shall employ an adequate number of qualified and skilled personnel to perform all critical activities for the operation and maintenance of his aerodrome.

(2) If the Chief Executive requires the competency of the personnel referred to in sub-paragraph (1) to be certified, the aerodrome operator shall, for the purposes of that sub-paragraph, employ only persons possessing such certification.

*[S 423/2010 wef 02/08/2010]*

(3) An aerodrome operator shall implement programmes to upgrade the competency of the personnel referred to in sub-paragraph (1).

*[S 440/2003 wef 15/09/2003]*

### **Aerodrome operation and maintenance**

**67E.**—(1) Subject to such directions that the Chief Executive may issue, an aerodrome operator shall operate and maintain his aerodrome in accordance with the procedures set out in the aerodrome manual.

*[S 423/2010 wef 02/08/2010]*



(2) An aerodrome operator shall ensure proper and efficient maintenance of the aerodrome facilities and equipment.

(3) An aerodrome operator shall, in respect of his aerodrome, ensure that —

- (a) appropriate air traffic services are available to ensure the safety of aircraft in the airspace associated with the aerodrome; and
- (b) aeronautical information services, meteorological services and provision of security and other services relating to safety are available.

*[S 440/2003 wef 15/09/2003]*

### **Aerodrome operator's safety management system**

**67F.** Every aerodrome operator shall, by 24th November 2005, establish and implement an operating safety management system that complies with the standards specified in the Manual of Aerodrome Standards at each of his aerodromes to which this Order applies.

*[S 440/2003 wef 15/09/2003]*

### **Access to aerodrome**

**67G.—**(1) The Chief Executive or any authorised person may, before an aerodrome certificate is granted and subsequently at any other time, for the purpose of ensuring safety at an aerodrome —

- (a) inspect and carry out tests on the aerodrome facilities, equipment or services;
- (b) inspect the aerodrome operator's documents and records;  
or
- (c) verify the aerodrome's safety management system.

*[S 423/2010 wef 02/08/2010]*

(2) For the purposes of sub-paragraph (1), an aerodrome operator shall, at the request of the Chief Executive or any authorised person, allow access to any part of the aerodrome or any aerodrome facility, equipment, records and operator personnel.

*[S 423/2010 wef 02/08/2010]*

(3) An aerodrome operator shall co-operate in facilitating the activities referred to in sub-paragraph (1).

*[S 440/2003 wef 15/09/2003]*

### **Notification and reporting**

**67H.**—(1) An aerodrome operator shall review every Aeronautical Information Publication, AIP Supplement, AIP Amendment, Notice to Airmen, Pre-flight Information Bulletin and Aeronautical Information Circular issued by the Aeronautical Information Services provider on receipt thereof and shall, immediately after such review, notify the Aeronautical Information Services provider of any inaccurate information contained therein that pertains to his aerodrome.

*[S 423/2010 wef 02/08/2010]*

(2) An aerodrome operator shall, in writing and within such period of time as may be specified by the Chief Executive, notify the Aeronautical Information Services provider of any change to any aerodrome facility or equipment or the level of service at the aerodrome —

- (a) which has been planned in advance; and
- (b) which is likely to affect the accuracy of the information contained in any publication by the Aeronautical Information Services provider referred to in sub-paragraph (1),

before effecting the change.

*[S 423/2010 wef 02/08/2010]*

(3) Subject to sub-paragraph (4), an aerodrome operator shall give the Aeronautical Information Services provider, and shall arrange for the air traffic control unit to receive, immediate notice detailing any of the following circumstances of which the aerodrome operator has knowledge:

- (a) in respect of obstacles, obstructions and hazards —
  - (i) any projection by an object through an obstacle limitation surface relating to the aerodrome; and

- (ii) the existence of any obstruction or hazardous condition affecting aviation safety at or near the aerodrome;
- (b) any change in the level of service at the aerodrome as set out in any publication by the Aeronautical Information Services provider referred to in sub-paragraph (1) or any variation (that has been accepted by the Chief Executive) from the Manual of Aerodrome Standards;  
*[S 423/2010 wef 02/08/2010]*
- (c) closure of any part of the movement area of the aerodrome;
- (d) any significant change in any aerodrome facility or the physical layout of the aerodrome; and
- (e) any other condition that could affect aviation safety at the aerodrome and against which precautions are warranted.  
*[S 423/2010 wef 02/08/2010]*

(4) When it is not feasible for an aerodrome operator to arrange for the air traffic control unit to receive notice of any circumstance referred to in sub-paragraph (3), the aerodrome operator shall give immediate notice directly to the pilots who may be affected by that circumstance.

*[S 440/2003 wef 15/09/2003]*

### **Special inspections**

**67I.** An aerodrome operator shall inspect an aerodrome, as circumstances require, to ensure aviation safety —

- (a) as soon as practicable after any aircraft accident or incident within the meaning of these terms as defined in the Air Navigation (Investigation of Accidents and Incidents) Order 2003 (G.N. No. S 78/2003);
- (b) during and immediately after any period of construction or repair of any aerodrome facility or equipment that is critical to the safety of aircraft operation; and

- (c) at any other time when there are conditions at the aerodrome that could affect aviation safety.

[S 440/2003 wef 15/09/2003]

### Handling of obstructions

**67J.**—(1) An aerodrome operator shall remove from the aerodrome surface any vehicle or any other obstruction that is likely to be hazardous to aircraft operations.

(2) An aerodrome operator shall not permit any structure in any area within his control to exceed the obstacle limitation surface and shall take such reasonable measures within his power to prevent any other structure from so exceeding, except in the case of —

- (a) any frangible structure which, by virtue of its function, must be located on the runway strip;
- (b) any structure which is shielded in accordance with the Manual of Aerodrome Standards by an existing object; or
- (c) any structure which, after aeronautical study, is determined not to adversely affect the safety or significantly affect the regularity of operations of aircraft.

[S 440/2003 wef 15/09/2003]

### Warning notices

**67K.** When any low flying aircraft, at or near an aerodrome, or taxiing aircraft is likely to be hazardous to any person or vehicular traffic, the aerodrome operator shall —

- (a) post hazard warning notices on any public way that is adjacent to the manoeuvring area; or
- (b) if such a public way is not controlled by the aerodrome operator, inform the authority responsible for posting the notices on the public way that there is a hazard.

[S 440/2003 wef 15/09/2003]

### Deviation from Manual of Aerodrome Standards

**67L.**—(1) Where an aerodrome fails to comply with any standard specified in the Manual of Aerodrome Standards, the Chief Executive

may, after taking into consideration such aeronautical or other studies as he thinks fit, determine any condition or procedure necessary to ensure that the aerodrome attains a level of safety equivalent to that established by the standard.

*[S 423/2010 wef 02/08/2010]*

(2) The aerodrome operator of an aerodrome referred to in sub-paragraph (1) shall ensure that the aerodrome complies with any condition or procedure determined by the Chief Executive under that sub-paragraph.

*[S 423/2010 wef 02/08/2010]*

(3) Any deviation of an aerodrome from any standard specified in the Manual of Aerodrome Standards shall be set out in an endorsement to the relevant aerodrome certificate.

*[S 440/2003 wef 15/09/2003]*

**67M.** *[Deleted by S 683/2018 wef 09/10/2018]*

**67N.** *[Deleted by S 423/2010 wef 02/08/2010]*

### **Charges at Government aerodromes and certified aerodromes**

**68.—**(1) The Minister may, in relation to any Government aerodrome notified in pursuance of paragraph 66, or in relation to any aerodrome in respect of which an aerodrome certificate has been granted, or to such aerodromes generally or to any class thereof, prescribe the charges, or the maximum charges, which may be made for the use of the aerodrome and for any services performed at the aerodrome to or in connection with aircraft, and may further prescribe the conditions to be observed in relation to those charges and the performance of these services.

*[S 440/2003 wef 15/09/2003]*

(2) The operator of a certified aerodrome in relation to which the Minister has prescribed any charges or conditions under sub-paragraph (1) shall not cause or permit any charges to be made in contravention of the prescribed charges, and shall cause particulars of the prescribed charges to be kept exhibited at the aerodrome in

such a place and manner as to be readily available for the information of any person affected thereby.

*[S 440/2003 wef 15/09/2003]*

(3) The operator of any certified aerodrome shall, when required by the Minister, furnish to the Minister such particulars as he may require of the charges established by the operator for the use of the aerodrome or of any facilities provided at the aerodrome for the safety, efficiency or regularity of air navigation.

*[S 440/2003 wef 15/09/2003]*

### **Use of aerodromes by aircraft of Contracting States**

**69.** The operator of any certified aerodrome in Singapore which is available for the take-off and landing of Singapore aircraft engaged in flights for the purpose of public transport or instruction in flying shall cause the aerodrome, and all air navigation facilities provided thereat, to be available for use by aircraft registered in other Contracting States on the same terms and conditions as for use by Singapore aircraft.

*[S 440/2003 wef 15/09/2003]*

### **Noise and vibration caused by aircraft on aerodrome**

**70.**—(1) Noise and vibration may be caused by aircraft including military aircraft, on Government aerodromes, certified aerodromes or on aerodromes at which the production, repair or maintenance of aircraft is carried out by persons carrying on business as producers or repairers of aircraft, under the following conditions that is to say, that whether in the course of the production of the aircraft or otherwise —

- (a) the aircraft is taking off or landing; or
- (b) the aircraft is moving on the ground or water; or
- (c) the engines are being operated in the aircraft —
  - (i) for the purpose of ensuring their satisfactory performance;
  - (ii) for the purpose of bringing them to a proper temperature in preparation for, or at the end of, a flight; or

- (iii) for the purpose of ensuring that the instruments, accessories or other components of the aircraft are in a satisfactory condition.

*[S 440/2003 wef 15/09/2003]*

*[S 331/2005 wef 02/06/2005]*

(2) Section 4(2) of the Act shall apply to the aerodromes specified in sub-paragraph (1).

*[S 331/2005 wef 02/06/2005]*

### **Aeronautical lights**

**71.—**(1) A person shall not establish or maintain an aeronautical light within Singapore except with the permission of the Chief Executive and in accordance with any conditions subject to which the permission may be granted.

*[S 423/2010 wef 02/08/2010]*

(2) A person shall not alter the character of an aeronautical light within Singapore except with the permission of the Chief Executive and in accordance with any conditions subject to which the permission may be granted.

*[S 423/2010 wef 02/08/2010]*

(3) A person shall not wilfully or negligently damage or interfere with any aeronautical light established and maintained by or with the permission of the Chief Executive.

*[S 423/2010 wef 02/08/2010]*

### **Dangerous lights**

**72.—**(1) A person shall not exhibit in Singapore any light which —

- (a) by reason of its glare or any other cause or character of the light, is liable to endanger aircraft or interfere with the provision of air traffic control service for aerodrome traffic at any aerodrome; or
- (b) by reason of its liability to be mistaken for an aeronautical light, is liable to endanger aircraft.

(2) A person shall not direct or shine any light, or cause or permit any light to be directed or shone at an aircraft such that the safety of the aircraft is or is likely to be endangered.

(3) A person shall not conduct any outdoor light display unless —

(a) the person has in force a permit granted under sub-paragraph (4) authorising him to do so; and

(b) the person conducts the outdoor light display in accordance with the conditions of that permit.

(4) The Chief Executive may grant a written permit in such form or manner as he may determine, and subject to such conditions as he thinks fit.

(5) An application for a permit under sub-paragraph (3) shall be submitted —

(a) in such form as may be determined by the Chief Executive and shall include any documents or information as the Chief Executive may require; and

(b) no later than 7 working days before the date on which the activity in sub-paragraph (3) is intended to be carried out.

(6) A permit granted under sub-paragraph (4) shall be valid for such period as may be specified therein.

(7) An authorised person may require a person whom he has reasonable grounds to suspect is just about to contravene, has just contravened or is contravening any provision in this paragraph, to furnish his name, address or such other proof of identity on demand.

(8) Any person who —

(a) refuses, or without reasonable excuse, fails to comply with sub-paragraph (7);

(b) in furnishing any information so required under sub-paragraph (7) makes a statement which he knows to be false, or recklessly makes a statement which is false; or

(c) wilfully obstructs or impedes any authorised person acting in the exercise of a power conferred on him by or under sub-paragraph (7),



shall be guilty of an offence.

(9) Any person who —

(a) fails to comply with any condition in a permit granted to him under this paragraph; or

(b) contravenes any provision in sub-paragraph (1), (2) or (3),

shall be guilty of an offence.

(10) For the purposes of this paragraph —

(a) aerodrome shall include a military aerodrome;

(b) aircraft shall include a military aircraft; and

(c) “outdoor light display” means a display of one or more lights which includes any searchlight, laser-beam, fireworks or any other type of high intensity light that projects into airspace for purposes of entertainment.

*[S 617/2012 wef 17/12/2012]*

### **Aviation fuel at aerodromes**

**72A.**—(1) A person who has the management of an aviation fuel installation on an aerodrome in Singapore shall not cause or permit any fuel to be delivered to that installation or from it to an aircraft unless —

(a) when the fuel is delivered into the installation he is satisfied that —

(i) the installation is capable of storing and dispensing the fuel so as not to render it unfit for use in aircraft;

(ii) the installation is marked in a manner appropriate to the grade of fuel stored or if different grades are stored in different parts each part is so marked; and

(iii) in the case of delivery into the installation or part thereof from a vehicle or vessel, the fuel has been sampled and is of a grade appropriate to that installation or that part of the installation as the case may be and is fit for use in aircraft; and

(b) when any aviation fuel is dispensed from the installation he is satisfied as the result of sampling that the fuel is fit for use in aircraft.

(2) Sub-paragraph (1) shall not apply in respect of fuel which has been removed from an aircraft and it is intended for use in another aircraft operated by the same operator as the aircraft from which it has been removed.

(3) A person to whom sub-paragraph (1) applies shall —

(a) keep a written record in respect of each installation of which he has the management, which record shall include —

(i) particulars of the grade and quantity of aviation fuel delivered and the date of delivery;

(ii) particulars of all samples taken of the aviation fuel and of the results of tests of those samples; and

(iii) particulars of the maintenance and cleaning of the installation;

(b) preserve the written record for a period of 12 months or such longer period as the Chief Executive may direct; and

*[S 278/2010 wef 15/05/2010]*

(c) within a reasonable time after being requested to do so by the Chief Executive or an authorised person, produce such record to the Chief Executive or that authorised person.

*[S 384/2000 wef 31/08/2000]*

*[S 278/2010 wef 15/05/2010]*

(4) A person shall not cause or permit any aviation fuel to be dispensed for use in an aircraft if he knows or has reason to believe that the aviation fuel is not fit for use in aircraft.

(5) If it appears to the Chief Executive or an authorised person that any aviation fuel is intended or likely to be delivered in contravention of any provision of this paragraph, the Chief Executive or that authorised person may direct the person having the management of the installation not to permit aviation fuel to be dispensed from that

installation until the direction has been revoked by the Chief Executive or by an authorised person.

*[S 278/2010 wef 15/05/2010]*

(5A) The Chief Executive or an authorised person shall have the right of access at all reasonable times to any aviation fuel installation on an aerodrome —

- (a) for the purpose of inspecting the installation or any aviation fuel delivered thereto or stored therein;
- (b) for the purpose of inspecting any record required by sub-paragraph (3) to be kept; or
- (c) to cause such inspections, investigations or tests to be made as he considers necessary for the purpose of ensuring compliance with this paragraph.

*[S 384/2000 wef 31/08/2000]*

*[S 278/2010 wef 15/05/2010]*

(6) For the purpose of this paragraph —

“aviation fuel” means fuel intended for use in aircraft;

“aviation fuel installation” means any apparatus or container, including a vehicle, designed, manufactured or adapted for the storage of aviation fuel or for the delivery of such fuel to an aircraft.

*[S 49/92 wef 01/02/1992]*

### **Aerodrome rescue and fire fighting training organisation**

**72B.**—(1) No person shall provide any course of training or instruction in aerodrome rescue and fire fighting to a holder of an aerodrome certificate granted under paragraph 67(4) unless he is an approved aerodrome rescue and fire fighting training organisation.

(2) If —

- (a) a person makes the application to be an approved aerodrome rescue and fire fighting training organisation in such manner and form as the Authority may require;

*[S 589/2016 wef 18/11/2016]*

- (b) the person provides one or more courses of training or instruction in aerodrome rescue and fire fighting that are acceptable to the Authority; and

*[S 589/2016 wef 18/11/2016]*

- (c) in a case where a simulator is to be used for the purposes of aerodrome rescue and fire fighting training, the person uses a simulator that is acceptable to the Authority,

*[S 589/2016 wef 18/11/2016]*

the Authority may grant a written approval to the person as an aerodrome rescue and fire fighting training organisation, either absolutely or subject to such conditions as the Authority thinks fit.

*[S 589/2016 wef 18/11/2016]*

(3) The Authority may, in such manner as the Authority thinks fit, publish a manual, to be called the “Manual of Standards — Aerodrome Rescue and Fire Fighting Training”, containing such standards, recommended practices and guidance material relating to aerodrome rescue and fire fighting training as the Authority may determine to be applicable in Singapore.

*[S 589/2016 wef 18/11/2016]*

(4) An approved aerodrome rescue and fire fighting training organisation shall comply with the applicable standards specified in the Manual of Standards — Aerodrome Rescue and Fire Fighting Training and the conditions of the written approval granted to him under sub-paragraph (2).

(5) *[Deleted by S 589/2016 wef 18/11/2016]*

(6) *[Deleted by S 589/2016 wef 18/11/2016]*

(7) *[Deleted by S 589/2016 wef 18/11/2016]*

(8) *[Deleted by S 589/2016 wef 18/11/2016]*

(9) In this paragraph, “approved aerodrome rescue and fire fighting training organisation” means a person who is approved as an aerodrome rescue and fire fighting training organisation under sub-paragraph (1).

*[S 570/2011 wef 04/10/2011]*

*[S 589/2016 wef 18/11/2016]*

72C. [Deleted by S 589/2016 wef 18/11/2016]

## PART XA

### UNMANNED AIRCRAFT OPERATIONS AND ACTIVITIES

[S 351/2015 wef 02/06/2015]

#### Application of this Part

**72D.** Nothing in this Part applies to require a person in Singapore who operates —

- (a) an unmanned aircraft which is, or flies wholly, outside of Singapore;
- (b) an unmanned aircraft indoors —
  - (i) at a private residence for any purpose; or
  - (ii) at an experimental site in connection with the construction or testing of that unmanned aircraft; or
- (c) a small unmanned aircraft that is not an airship outdoors for a recreation purpose or research purpose at an altitude not exceeding 200 feet above mean sea level and outside of the following areas:
  - (i) any restricted area or danger area;
  - (ii) any area within 5 kilometres of any aerodrome,

to obtain a UA operator permit or an activity permit before doing so.

[S 351/2015 wef 02/06/2015]

#### Prohibited operation of unmanned aircraft

**72E.—(1)** A person must not operate an unmanned aircraft —

- (a) outdoors within the boundaries of any prohibited area; or
- (b) indoor or outdoors anywhere in Singapore in a manner likely to endanger the safety of any person, aircraft or property.

(2) To avoid doubt, a UA operator permit and an activity permit do not authorise the holder of the permit to act in contravention of this paragraph.

[S 351/2015 wef 02/06/2015]

### **Operation of unmanned aircraft requires permit**

**72F.**—(1) A person must not operate a large unmanned aircraft for any purpose except under the authority and in accordance with —

- (a) a UA operator permit for operating the unmanned aircraft type corresponding to the large unmanned aircraft and for the purpose specified in that permit; and
- (b) a Class 1 activity permit for flying the unmanned aircraft type corresponding to that large unmanned aircraft.

(2) A person must not operate outdoors a small unmanned aircraft for a recreation purpose or research purpose except under the authority and in accordance with a Class 2 activity permit for flying the unmanned aircraft type corresponding to that small unmanned aircraft.

(3) A person must not operate a small unmanned aircraft outdoors, or indoor in premises that are neither a private residence nor an experimental site for that aircraft, in the course of a business or for purpose that is neither a recreation purpose nor a research purpose, except under the authority and in accordance with —

- (a) a UA operator permit for operating the unmanned aircraft type corresponding to the small unmanned aircraft and for the purpose specified in that permit; and
- (b) a Class 1 activity permit for flying the unmanned aircraft type corresponding to that small unmanned aircraft.

#### *Illustrations*

- (a) A person who intends to fly indoors or outdoors a small unmanned aircraft in connection with advertising, farming or other agricultural activity, a survey or an inspection of any site or building, or to carry out surveillance or a search and rescue operation, or to deliver anything in the course of business, will need to apply for both a UA operator permit and a Class 1 activity permit.

- (b) A person who intends to conduct training or organise classes for a fee on the use or operation of unmanned aircraft will need to apply for both a UA operator permit and a Class 1 activity permit.

[S 351/2015 wef 02/06/2015]

### **UA operator permit**

**72G.**—(1) An application for or to renew a UA operator permit must be made to the Authority in accordance with this paragraph.

(2) An application for or to renew a UA operator permit must —

- (a) be in the form or manner required by the Authority;
- (b) be accompanied by a fee of the amount specified in paragraph 22 of the Twelfth Schedule; and
- (c) be accompanied by the following information:
  - (i) the type of unmanned aircraft to be operated;
  - (ii) the purpose for which the unmanned aircraft in the application is to be operated and the nature of those operations (such as the schedule or frequency, and area of operation);
  - (iii) the qualifications of the applicant and of every individual engaged or employed, or to be engaged or employed, by the applicant to fly the unmanned aircraft in the application, including the type of training (if any) the applicant and every such individual has undergone in operating unmanned aircraft;
  - (iv) any other additional information that the Authority may require to decide on the application.

(3) The Authority may refuse to consider an application for or to renew a UA operator permit that is incomplete or not made in accordance with sub-paragraph (2).

(4) After considering any application for or to renew a UA operator permit, the Authority may —

(a) on payment of —

(i) a UA operator permit fee (if prescribed in the Twelfth Schedule), grant the applicant a UA operator permit;  
or

(ii) a renewal fee and (where applicable) a late renewal fee (if prescribed), renew the UA operator permit; or

(b) refuse to grant or renew the UA operator permit.

(5) For the purposes of section 4A(2)(a) of the Act, in deciding whether an applicant should be granted a UA operator permit, or whether the UA operator permit should be renewed, and the conditions to impose or modify, the Authority must be satisfied that —

(a) the applicant; and

(b) every individual named in the application as engaged or employed, or to be engaged or employed, by the applicant to fly the unmanned aircraft,

capable of ensuring the safe operation of the unmanned aircraft specified in the application.

(6) The conditions that may be imposed on a UA operator permit include requiring the holder of the UA operator permit —

(a) to ensure the safe operation of the unmanned aircraft specified in the permit whenever it is flown; and

(b) to adhere to any document issued by the Authority providing practical guidance on the safe operation of unmanned aircraft.

(7) A UA operator permit may be granted or renewed for such period specified in the permit, being a period not exceeding one year.

*[S 351/2015 wef 02/06/2015]*

### **Activity permits**

**72H.**—(1) An application for an activity permit must be made to the Authority in accordance with this paragraph.



(2) An application for an activity permit relating to an unmanned aircraft must —

- (a) be in the form or manner required by the Authority;
- (b) be accompanied by a fee of the relevant amount specified in paragraph 23 of the Twelfth Schedule; and
- (c) be accompanied by the following information:
  - (i) the type of flying activity to be carried out involving the unmanned aircraft specified in the application;
  - (ii) the intended time and date, or intended period, and the intended location and operating altitude of the flying activity;
  - (iii) the UA operator permit if the activity involves flying a large unmanned aircraft, or the activity involves flying a small unmanned aircraft in the course of a business or for purpose that is neither a recreation purpose nor a research purpose;
  - (iv) any other additional information that the Authority may require to decide on the application.

(3) The Authority may refuse to consider an application for an activity permit that is incomplete or not made in accordance with sub-paragraph (2).

(4) After considering any application for an activity permit, the Authority may —

- (a) on payment of an activity permit fee (if prescribed in the Twelfth Schedule), grant the applicant an activity permit; or
- (b) refuse to grant the activity permit.

(5) For the purposes of section 4A(2)(a) of the Act, in deciding whether an applicant should be granted an activity permit, and the conditions to impose or modify, the Authority must be satisfied that the applicant is capable of ensuring the safe conduct of the activity specified, or to be specified, in the permit.

(6) The conditions that may be imposed on an activity permit granted include requiring the holder of the activity permit —

- (a) to fly the unmanned aircraft only for the activity or activities specified in the activity permit; and
- (b) to fly the unmanned aircraft only at the time or period, location, and at an altitude below the maximum operating altitude, specified in the activity permit.

(7) An activity permit for an unmanned aircraft is valid only for the period specified in the permit.

*[S 351/2015 wef 02/06/2015]*

### **Variation of permits**

**72I.**—(1) A holder of a Class 1 or Class 2 activity permit may, at any time before the start of the activity specified in the permit, apply to the Authority to vary the activity permit because of a change in the date or time of the activity so specified.

(2) A holder of a UA operator permit may, at any time, apply to the Authority to vary the permit concerned because of —

- (a) an addition or substitution of any unmanned aircraft type specified in the permit;
- (b) a change in the persons who operate or are engaged or employed to operate any unmanned aircraft type specified in the permit; or
- (c) a change to the area or purpose of operations specified in the permit.

(3) An application to vary an activity permit or a UA operator permit must be made to the Authority in the form and manner required by the Authority, and be accompanied by the fee (if prescribed in the Twelfth Schedule) for the application to vary.

(4) The Authority may refuse to consider an application to vary an activity permit or a UA operator permit —

- (a) that is incomplete; or

- (b) that is not made in accordance with sub-paragraph (1) or (2).

*[S 351/2015 wef 02/06/2015]*

### **Notification in cases not requiring permit**

**72J.** A person who intends to operate an unmanned airship must, before carrying out any such activity in relation to the unmanned airship, inform the Chief Executive in writing at least 7 working days before the date on which the activity starts.

*[S 351/2015 wef 02/06/2015]*

### **Power to demand names and addresses, etc.**

**72K.—(1)** An authorised person may require a person whom he has reasonable grounds to suspect is just about to contravene, has just contravened or is contravening any provision in this Part, to furnish his name, address or such other proof of identity on demand.

(2) Any person who —

- (a) refuses or, without reasonable excuse, fails to comply with sub-paragraph (1); or
- (b) in furnishing any information so required under sub-paragraph (1), makes a statement which he knows to be false, or recklessly makes a statement which is false,

shall be guilty of an offence.

*[S 351/2015 wef 02/06/2015]*

### **Definitions of this Part**

**72L.** In this Part, unless the context otherwise requires —

“activity permit” means a Class 1 or Class 2 activity permit granted under paragraph 72H;

“aerodrome” includes a military aerodrome;

“business” includes a profession or trade or an occupation or undertaking, whether or not conducted on a regular, repetitive or continuous basis and whether or not engaged in or carried on for a fee or profit;

“experimental site”, for an unmanned aircraft under construction or testing, means any enclosed premises or indoor area which, for the period the unmanned aircraft is constructed or to be tested —

- (a) is used solely or mainly for the purpose of constructing or testing the unmanned aircraft; and
- (b) is accessible only to individuals involved in the construction or testing of the unmanned aircraft;

“flying display” means the flying, as an exhibition or for entertainment, of one or more unmanned aircraft at an organised event which the organiser reasonably believes to be attended by more than 500 persons;

“large unmanned aircraft” means an unmanned aircraft with a total mass exceeding 7 kilogrammes;

“small unmanned aircraft” means an unmanned aircraft that is not a large unmanned aircraft;

“recreation purpose” means any pursuit or activity engaged in for enjoyment, relaxation or leisure, but not —

- (a) a sporting activity that forms part of an organised group activity or organised competition or tournament (such as a flying display); or
- (b) a recreational activity provided by a business, or in the course of business;

“research purpose” means —

- (a) any lecture, tutorial, seminar, demonstration, class or similar activity on unmanned aircraft provided by an educational institution referred to in section 72 of the Private Education Act (Cap. 247A); or
- (b) any research and development activity carried on by an educational institution referred to in section 72 of the Private Education Act with the object of acquiring knowledge that may be of use for the purpose of devising or developing a new or

substantially improved product that is an unmanned aircraft;

“total mass” means the mass of the aircraft including the mass of any other thing that may be attached to the aircraft during its operation, such as any payload, battery or fuel;

“UA operator permit” means a permit of that name granted under paragraph 72G.

*[S 351/2015 wef 02/06/2015]*

## PART XI

### GENERAL

**73.** *[Deleted by S 683/2018 wef 09/10/2018]*

#### **Approval of persons to furnish reports**

**73A.** In relation to any of its functions pursuant to any of the provisions of this Order, the Chief Executive may, either absolutely or subject to such conditions as he thinks fit, approve a person as qualified to furnish reports to him and may accept such reports.

*[S 61/93 wef 19/03/1993]*

*[S 278/2010 wef 15/05/2010]*

**74.** *[Deleted by S 683/2018 wef 09/10/2018]*

**75.** *[Deleted by S 683/2018 wef 09/10/2018]*

#### **Enforcement of directions**

**76.** Any person who fails to comply with any direction given to him by the Minister or by any authorised person under any provision of this Order or any regulations made or requirements notified thereunder shall be deemed for the purposes of this Order to have contravened that provision.

#### **Fees**

**77.—(1)** The provisions of the Twelfth Schedule shall have effect with respect to the fees to be charged in connection with the issue, validation, renewal, extension or variation of any certificate, licence

or other document (including an application for, or the issue of a copy of, any such document), 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, this Order or any regulations made thereunder.

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

*[S 348/2013 wef 17/06/2013]*

(3) The Chief Executive may, in any particular case, waive or refund in whole or in part any fee payable under this Order on such terms and conditions as he thinks fit.

*[S 348/2013 wef 17/06/2013]*

### **Exercise of powers, etc., of the Minister outside Singapore**

**78.** In so far as the exercise of any power or the performance of any duty of the Minister under this Order may be required outside Singapore in any country where there is no representative of the Minister competent to exercise such power or to perform such duty the Minister may authorise in writing any person appearing to him to be qualified to do so or the holder for the time being of any office, to exercise such power or to perform such duty.

### **Regulations by the Minister**

**79.** The Minister may make regulations for carrying out the purposes and provisions of this Order .

*[S 278/2010 wef 15/05/2010]*

### **Penalties**

**80.—**(1) If any provision of this Order or of any regulations made thereunder is contravened in relation to an aircraft, the operator of that aircraft and the pilot-in-command thereof, if the operator or, as the case may be, the pilot-in-command is not the person who contravened that provision shall (without prejudice to the liability of any other person under this Order for that contravention) be deemed

for the purposes of the following provisions of this paragraph to have contravened that provision unless he proves that the contravention occurred without his consent or connivance and that he exercised all due diligence to prevent the contravention.

*[S 423/2010 wef 02/08/2010]*

(2) If it is proved that an act or omission of any person which would otherwise have been a contravention by that person of a provision of this Order or of any regulations made thereunder was due to any cause not avoidable by the exercise of reasonable care by that person the act or omission shall be deemed not to be a contravention by that person of that provision.

(3) Where a person is charged with contravening a provision of this Order or any regulations made thereunder by reason of his having been a member of the flight crew of an aircraft on a flight for the purpose of public transport or aerial work the flight shall be treated (without prejudice to the liability of any other person under this Order) as not having been for that purpose if he proves that he neither knew nor had reason to know that the flight was for that purpose.

(4) If any person contravenes any provision of this Order, or of any regulations made thereunder, not being a provision referred to in sub-paragraph (5) or (6) he shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000 or in the case of a second or subsequent conviction for the like offence to a fine not exceeding \$20,000.

*[S 180/92 wef 01/05/1992]*

*[S 299/2009 wef 30/06/2009]*

*[S 124/2012 wef 02/04/2012]*

(5) If any person contravenes any provision specified in Part A of the Thirteenth Schedule he shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$20,000, or in the case of a second or subsequent conviction for the like offence to a fine not exceeding \$40,000 or to imprisonment for a term not exceeding 15 months or to both.

*[S 124/2012 wef 02/04/2012]*

(6) If any person contravenes any provision specified in Part B of the Thirteenth Schedule he shall be guilty of an offence and shall be

liable on conviction to a fine not exceeding \$100,000 or to imprisonment for a term not exceeding 5 years or to both.

[S 299/2009 wef 30/06/2009]

[S 124/2012 wef 02/04/2012]

**81.** [*Deleted by S 683/2018 wef 09/10/2018*]

### **Application of this Order to Singapore controlled aircraft not registered in Singapore**

**82.** The Chief Executive may direct that such of the provisions of this Order and of any regulations made or having effect thereunder as may be specified in the direction shall have effect as if reference in those provisions to aircraft registered in Singapore included references to the aircraft specified in the direction, being an aircraft not so registered but for the time being under the management of a person who, or of persons each of whom, is qualified to hold a legal or beneficial interest by way of ownership in an aircraft registered in Singapore.

[S 278/2010 wef 15/05/2010]

### **Application of this Order to the Government and visiting forces, etc.**

**83.—(1)** [*Deleted by S 683/2018 wef 09/10/2018*]

**(2)** [*Deleted by S 683/2018 wef 09/10/2018*]

**(3)** Except as otherwise provided by sub-paragraph (4), paragraph 55A(4), paragraph 55A(7), paragraph 62(2), paragraph 70 and paragraph 72, nothing in this Order shall apply to or in relation to any military aircraft.

[S 49/92 wef 01/02/1992]

[S 278/2010 wef 15/05/2010]

[S 617/2012 wef 17/12/2012]

**(4)** Where a military aircraft is flown by a civilian pilot and is not commanded by a person who is acting in the course of his duty as a member of any of the Armed Forces or as a member of a visiting



force, the provisions of paragraphs 62 and 63 shall apply on the occasion of that flight.

*[S 683/2018 wef 09/10/2018]*

**84.** *[Deleted by S 683/2018 wef 09/10/2018]*

### **Saving**

**85.** Subject to paragraphs 67 and 68, nothing in this Order or the regulations made thereunder shall confer any right to land in any place as against the owner of the land or other persons interested therein.

### **Application of this Order to certain types of aircraft**

**86.—**(1) The provisions of this Order, other than paragraphs 2(1) and (5) and 64 to 64I (as the case may be) do not apply to or in relation to —

- (a) any balloon or free flight aerial object which at any stage of its flight is not more than 2 metres in any linear dimension including any object attached to the balloon or free flight aerial object;
- (b) any kite weighing not more than 2 kilogrammes; or
- (c) any parasail.

*[S 683/2018 wef 09/10/2018]*

(2) The provisions of this Order, other than Part XA and paragraphs 2(1), (2), (3) and (5), 77 and 80, do not apply to or in relation to any unmanned aircraft and any unmanned aircraft system.

*[S 351/2015 wef 02/06/2015]*

*[S 683/2018 wef 09/10/2018]*

**87.** *[Deleted by S 683/2018 wef 09/10/2018]*

### **Issue of operations permit**

**87A.—**(1) Subject to sub-paragraphs (7), (8) and (8A), a foreign air operator must not operate an aircraft into or out of Singapore for the purpose of public transport or aerial work unless —

- (a) the foreign air operator has in force an operations permit granted to him under sub-paragraph (5); and
- (b) the foreign air operator operates the aircraft in accordance with the conditions of that permit.

*[S 351/2015 wef 02/06/2015]*

*[S 616/2017 wef 31/10/2017]*

(2) Before the Chief Executive grants or renews an operations permit to a foreign air operator, the Chief Executive must be satisfied that —

- (a) if applicable, the foreign air operator has been granted an air operator certificate or an approval to conduct aerial work operations by a country or territory other than Singapore; and
- (b) the foreign air operator is capable of ensuring the safe operation of the foreign air operator's aircraft.

*[S 351/2015 wef 02/06/2015]*

(3) The holder of an operations permit may at any time apply in writing to the Chief Executive to vary the permit.

(4) An application for the grant, renewal or variation of an operations permit shall be submitted to the Chief Executive in such form and manner and shall contain such information as the Chief Executive may require.

(5) The Chief Executive may grant, renew or vary an operations permit —

- (a) upon payment of the fees specified in paragraph 20A of the Twelfth Schedule; and
- (b) in such form or manner as he may determine, and subject to such conditions as he thinks fit.

(6) An operations permit granted under sub-paragraph (5) shall remain in force for the period specified therein.

(7) Any foreign air operator who, immediately before 17th June 2013, is operating any aircraft into or out of Singapore on any non-scheduled journey for the purpose of public transport under a valid

permit granted under Part III of the Air Navigation (Licensing of Air Services) Regulations (Rg 2) (referred to in this paragraph as the relevant permit) shall not be required to obtain an operations permit under this paragraph for the period which the relevant permit is in force.

(8) Any foreign air operator who, on or after 17th June 2013, is operating any aircraft into or out of Singapore on any scheduled journey for the purpose of public transport may, without an operations permit, continue to operate such aircraft for the purpose of public transport for a period of 12 months after this date.

(8A) Any foreign air operator who has diplomatic clearance from the Government to land an aircraft in Singapore is not required, in respect of the aircraft, to obtain an operations permit under this paragraph for the period the diplomatic clearance is valid.

*[S 616/2017 wef 31/10/2017]*

(9) In this paragraph —

“foreign air operator” means an operator whose principal place of business is not in Singapore;

“non-scheduled journey” and “scheduled journey” have the same meanings as in the Air Navigation (Licensing of Air Services) Regulations.

*[S 348/2013 wef 17/06/2013]*

*[S 351/2015 wef 02/06/2015]*

### **Mandatory reporting**

**88.**—(1) Subject to this paragraph, any person who —

- (a) *[Deleted by S 683/2018 wef 09/10/2018]*
- (b) is the holder of any certificate or other form of written approval granted under paragraph 8;
- (c) is the holder of any certificate or other form of written approval granted under paragraph 8A;
- (d) may issue a certificate of maintenance review under paragraph 9 or a certificate of release to service under paragraph 10;

(e) [*Deleted by S 683/2018 wef 09/10/2018*]

(f) is the holder of an aerodrome certificate granted under paragraph 67; or

*[S 803/2015 wef 30/12/2015]*

(g) is the holder of an approval granted under paragraph 20(13)(c),

*[S 803/2015 wef 30/12/2015]*

shall —

(i) make a report to the Chief Executive of any reportable safety matter of which he knows and which is of such a description specified in the relevant document referred to in sub-paragraph (2A), within such time as is specified in that document for the making of such a report; and

*[S 683/2018 wef 09/10/2018]*

(ii) furnish to the Chief Executive such information which is in his possession or control and which relates to any reportable safety matter which has been reported by him or by another person, within such time and by such means as are specified in a notice in writing served upon him by the Chief Executive.

*[S 278/2010 wef 15/05/2010]*

*[S 683/2018 wef 09/10/2018]*

(2) In this paragraph, “reportable safety matter” means —

(a) any incident relating to such an aircraft or any defect in or malfunctioning of such an aircraft or any part or equipment of such an aircraft, being an incident, malfunctioning or defect endangering, or which if not corrected would endanger the aircraft, its occupants or any other person;

(b) any defect in or malfunctioning of any facility on the ground used or intended to be used for purposes of or in connection with the operation of such an aircraft, being a defect or malfunctioning endangering, or which if not corrected would endanger such an aircraft or its occupants;

- (c) any incident relating to a violation of any regulation or procedures of any Contracting State in which such an aircraft operates;

*[S 440/2003 wef 15/09/2003]*

*[S 803/2015 wef 30/12/2015]*

- (d) any incident, relating to a person undergoing any course of training or instruction provided by the holder of an approval granted under paragraph 20(13)(c), that occurred during the course.

*[S 803/2015 wef 30/12/2015]*

*[S 683/2018 wef 09/10/2018]*

(2A) The following documents are the relevant documents for the purposes of sub-paragraph (1)(i):

(a) *[Deleted by S 683/2018 wef 09/10/2018]*

- (b) in the case of a person who is a holder of any certificate or other form of written approval granted under paragraph 8, that part of the Singapore Airworthiness Requirements (SAR) known as SAR 21 or SAR 145, as may be applicable in respect of that person;
- (c) in the case of a person who is a holder of any certificate or other form of written approval granted under paragraph 8A or who may issue a certificate of release to service under paragraph 10, that part of the Singapore Airworthiness Requirements (SAR) known as SAR 145;
- (d) in the case of a person who may issue a certificate of maintenance review under paragraph 9, the Singapore Airworthiness Requirements (SAR);
- (e) *[Deleted by S 683/2018 wef 09/10/2018]*
- (f) in the case of a holder of an aerodrome certificate granted under paragraph 67, the Manual of Aerodrome Standards;

*[S 803/2015 wef 30/12/2015]*

- (g) in the case of a holder of an approval granted under paragraph 20(13)(c), the Singapore Air Safety Publication (SASP).

[S 278/2010 wef 15/05/2010]

[S 803/2015 wef 30/12/2015]

(3) Subject to sub-paragraph (1)(ii), nothing in this paragraph shall require a person to report any occurrence which he has reason to believe has been or will be reported by another person to the Chief Executive in accordance with this paragraph.

[S 278/2010 wef 15/05/2010]

(4) [Deleted by S 683/2018 wef 09/10/2018]

(5) [Deleted by S 683/2018 wef 09/10/2018]

**88A.** [Deleted by S 683/2018 wef 09/10/2018]

### Advisory circulars

**88B.**—(1) The Chief Executive may, from time to time, issue advisory circulars on any aspect of safety in civil aviation, including any aspect relating to —

- (a) the safety of any aircraft operation in Singapore and the operation of Singapore aircraft outside Singapore;
- (b) the inspection, overhaul, repair, replacement or modification of aircraft or aircraft components;
- (c) any matter relating to persons issued with any licence under this Order; or
- (d) the operation and management of an aerodrome.

(2) The Chief Executive shall publish each advisory circular in any way the Chief Executive thinks fit, except that failure to comply with this paragraph in respect of any advisory circular shall not invalidate the advisory circular.

[S 278/2010 wef 15/05/2010]

### Units of Measurement

**88C.**—(1) The Chief Executive may, in such manner as he thinks fit, publish a Manual of Standards — Units of Measurement to be

used in Air and Ground Operations containing such specifications on units of measurement in conformance with Annex 5 to the Chicago Convention.

(2) Any person involved in any aspect of international civil aviation air and ground operations in Singapore shall comply with the applicable specifications contained in the Manual of Standards — Units of Measurement to be used in Air and Ground Operations issued under sub-paragraph (1).

*[S 278/2010 wef 15/05/2010]*

### **Exemption from Requirements and Manuals of Standards**

**88D.** The Chief Executive may, if the circumstances require, exempt from any but not all of the provisions of the following Requirements or Manuals of Standards any aircraft or persons or classes of aircraft or persons, or any aerodrome, as the case may be, either absolutely or subject to such conditions as he thinks fit:

- (a) the Singapore Airworthiness Requirements (SAR);
- (b) the Singapore Air Safety Publication (SASP);
- (c) *[Deleted by S 683/2018 wef 09/10/2018]*
- (d) *[Deleted by S 683/2018 wef 09/10/2018]*
- (e) the Manual of Standards — Units of Measurement to be used in Air and Ground Operations;

*[S 278/2010 wef 15/05/2010]*

*[S 423/2010 wef 02/08/2010]*

- (f) the Manual of Aerodrome Standards;

*[S 423/2010 wef 02/08/2010]*

- (g) the Manual of Standards — Licensing of Air Traffic Control Personnel.

*[S 423/2010 wef 02/08/2010]*

### **Manual of Standards – Meteorological Service for International Air Navigation**

**88E.**—(1) The Authority may, in such manner as it thinks fit, publish a Manual of Standards — Meteorological Service for

International Air Navigation containing such standards, recommended practices and guidance material relating to aeronautical meteorological services as it may determine to be applicable in Singapore.

(2) Any person who provides meteorological services for international air navigation shall comply with the standards specified in the Manual of Standards — Meteorological Service for International Air Navigation published under sub-paragraph (1).

(3) The Authority shall have the right of access at all reasonable times to any meteorological facilities and personnel, for the purpose of carrying out any audit, inspection or investigation in relation to any requirement contained in the Manual of Standards — Meteorological Service for International Air Navigation published under sub-paragraph (1).

(4) The Authority shall have the power to inspect and copy any document or record, for the purposes of carrying out any such audit, inspection or investigation, or to ascertain if there is, or has been, a contravention of the Manual of Standards — Meteorological Service for International Air Navigation published under sub-paragraph (1).

(5) The Authority may, if the circumstances require, exempt any person who provides meteorological services for international air navigation, either absolutely or subject to such conditions as it thinks fit, from any but not all of the provisions of the Manual of Standards — Meteorological Service for International Air Navigation.

*[S 423/2010 wef 02/08/2010]*

### **Saving and transitional**

**89.—**(1) This Order shall apply to or in relation to any certificate, licence, approval, permission, exemption, authority, direction, log book, record or other document issued, granted or made under the Air Navigation Order 1973 [S 263/73], revoked by this Order, as it applies to a certificate, licence, approval, permission, exemption, authority, direction, log book, record or other document issued, granted or made under this Order.

(2) Any certificate, licence, approval, permission, exemption or other document issued or granted under the Air Navigation



Order 1973, revoked by this Order, in force on 1st July 1985 shall, subject to paragraph 60, remain in force and shall have effect for the purposes of this Order as if it had been granted under the corresponding provisions thereof:

Provided that any such document which is expressed to remain in force for a definite period shall remain in force, unless renewed, only until the expiration of that period.

(3) Any reference in any document to “certificate of compliance” and “certificate of maintenance” shall be construed as reference to “certificate of release to service” and “certificate of maintenance review”, respectively.

(4) Any certificate of maintenance issued immediately before 1st January 1989 shall continue to be in force until the date of expiry of that certificate.

(5) Any certificate of compliance issued immediately before 1st January 1989 shall continue to be in force until it is replaced by a certificate of release to service duly issued in accordance with the provisions of this Order.

## FIRST SCHEDULE

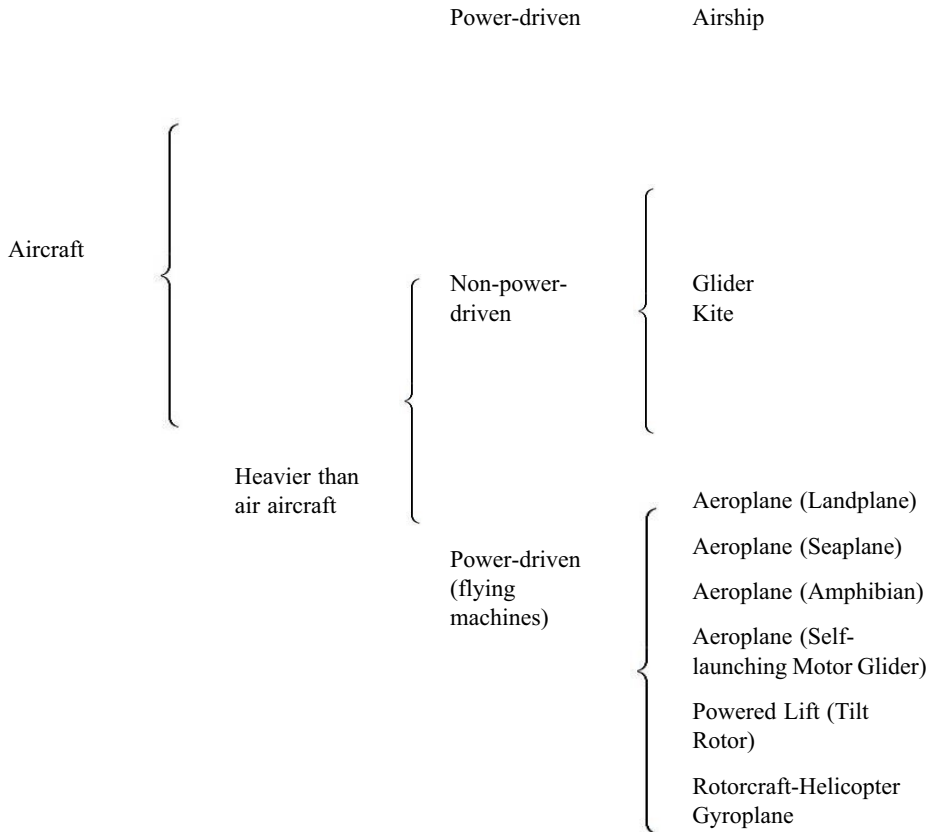
*(Paragraphs 2(5), 4(6) and 23(1))*

### PART A

#### TABLE OF GENERAL CLASSIFICATION OF AIRCRAFT

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>	<i>Column 4</i>
	Lighter than air aircraft	Non-power- driven	Free Balloon Captive Balloon

FIRST SCHEDULE — *continued*



[S 61/93 wef 19/3/93]

PART B □

*Paragraph 5(2).*

NATIONALITY AND REGISTRATION MARKS OF AIRCRAFT  
REGISTERED IN SINGAPORE.

1. The nationality mark of the aircraft shall be the arabic numeral “9” and the roman capital letter “V”, and the registration mark shall be a group of 3 capital letters in roman characters assigned by the Chief Executive on the registration of the aircraft. The letters shall be without ornamentation and a hyphen shall be placed between the nationality mark and the registration mark.

2. The nationality and registration marks shall be displayed in a prominent position, taking into consideration the construction features of the aircraft and shall always be kept clean and visible.

FIRST SCHEDULE — *continued*

3. The letters constituting each group of marks shall be of equal height and they, and the hyphen, shall be of a single colour which shall clearly contrast with the background on which they appear.

4. The nationality and registration marks shall be painted on the aircraft or shall be affixed thereto by any other means ensuring a similar degree of permanence in the following manner:

## I. Position and Size of Marks

(a) Heavier-than-air Aircraft (excluding kites) —

## (i) Horizontal Surfaces of the Wings:

(A) On aircraft having a fixed wing surface, the marks shall appear on the lower surface of the wing structure, and shall be on the port wing unless they extend across the whole surface of both wings. So far as is possible the marks shall be located equidistant from the leading and trailing edges of the wings. The tops of the letters shall be towards the leading edge of the wing.

(B) The height of the letters shall be at least 50 centimetres:

Provided that if the wings are not large enough for the marks to be 50 centimetres in height, marks of the greatest height practicable in the circumstances shall be displayed.

## (ii) Fuselage (or equivalent structure) and Vertical Tail Surfaces:

(A) The marks shall also appear either —

(AA) on each side of the fuselage (or equivalent structure), and shall, in the case of fixed wing aircraft, be located between the wings and the horizontal tail surface; or

(BB) on the vertical tail surfaces.

(B) When located on a single vertical tail surface, the marks shall appear on both sides. When located on multi-vertical tail surfaces the marks shall appear on the outboard sides of the outer surfaces. Subject to sub-paragraphs (D) and (E), the height of the letters constituting each group of marks shall be at least 30 centimetres.

(C) If one of the surfaces authorised for displaying the required marks is large enough for those marks to be

FIRST SCHEDULE — *continued*

30 centimetres in height (whilst complying with sub-paragraph (E)) and the other is not, marks of 30 centimetres in height shall be placed on the largest authorised surface.

- (D) If neither surface is large enough for marks of 30 centimetres in height (whilst complying with sub-paragraph (E)), marks of the greatest height practicable in the circumstances shall be displayed on the larger of the two surfaces.
- (E) The marks on the vertical tail surfaces shall be such as to leave a margin of at least 5 centimetres along each side of the vertical tail surface.
- (F) On rotary wing aircraft where owing to the structure of the aircraft the greatest height practicable for the marks on the sides of the fuselage (or equivalent structure) is less than 30 centimetres, the marks shall also appear on the lower surface of the fuselage as close to the line of symmetry as is practicable and shall be placed with the tops of the letters towards the nose. The height of the letters constituting each group of marks shall be at least 50 centimetres:

Provided that if the lower surface of the fuselage is not large enough for the marks to be of 50 centimetres in height, marks of the greatest height practicable in the circumstances shall be displayed.

- (iii) Wherever in sub-paragraph (a) marks of the greatest height practicable in the circumstance are required, that height shall be such as is consistent with Section II of this Part.

(b) Airships and Free Balloons —

- (i) Airships: The marks shall be placed on each side of the airship. They shall be placed horizontally either on the hull near the maximum cross-section of the airship or on the lower vertical stabiliser.
- (ii) Free Balloons: The marks shall be in two places on diametrically opposite sides of the balloon.
- (iii) In the case of both airships and free balloons, the side marks shall be so placed as to be visible both from the sides and from the ground. The height of the letters shall be at least 50 centimetres.

FIRST SCHEDULE — *continued*

## II. Width, Spacing and Thickness of Marks

- (a) (i) For the purposes of this Section, “a standard letter” shall mean any letter other than the letters I, M and W.
- (ii) The width of each standard letter and the length of the hyphen between the nationality marks and the registration mark shall be two-thirds of the height of a letter.
- (iii) The width of the letters M and W shall be neither less than two-thirds of their height nor more than their height.
- (iv) The width of the letter I shall be one-sixth of the height of the letters forming the marks.
- (b) The thickness of each letter and hyphen shall be one-sixth of the height of the letters forming the marks.
- (c) Each letter and hyphen shall be separated from the letter or hyphen which it immediately precedes or follows, by a space equal to either one-quarter or one-half of the width of a standard letter. Each such space shall be equal to every other such space within the marks.

5. In addition, the nationality and registration marks shall also be inscribed, together with the name and address of the registered owner of the aircraft, on a plate made of fireproof material, which shall be affixed in a prominent position —

- (a) in the case of a balloon, on the basket or envelope; or
- (b) in the case of any other aircraft, on the fuselage or car, near the main entrance.

*[S 61/93 wef 19/03/1993]*

*[S 278/2010 wef 15/05/2010]*

*[S 570/2011 wef 04/10/2011]*

## SECOND SCHEDULE

*(Paragraphs 3(1) and 4(8))*

## A, B AND C CONDITIONS

The A Conditions, the B Conditions and the C Conditions referred to in paragraphs 3(1) and 4(8) of the Order are as follows:

A Conditions.

SECOND SCHEDULE — *continued*

(1) The aircraft shall be either an aircraft in respect of which a Certificate of Airworthiness or validation has previously been in force under the provisions of the Order, or an aircraft identical in design with an aircraft in respect of which such a certificate is or has been in force.

(2) The aircraft shall fly only for the purpose of enabling it to

(a) qualify for the issue or renewal of a Certificate of Airworthiness or of the validation thereof or the approval of a modification of the aircraft, after an application has been made for such issue, renewal, validation or approval, as the case may be; or

(b) proceed to or from a place at which any inspection, test or weighing of the aircraft is to take place for a purpose referred to in sub-paragraph (a).

(3) The aircraft and its engines shall be certified as fit for flight by a holder of an aircraft maintenance licence in accordance with the requirements of the Singapore Airworthiness Requirements (SAR), or by a person approved by the Chief Executive for the purpose of issuing certificates under this condition.

(4) The aircraft shall carry the minimum flight crew specified in any Certificate of Airworthiness or validation which has previously been in force under the Order in respect of the aircraft, or is or has previously been in force in respect of any other aircraft of identical design.

(5) The aircraft shall not carry any passenger or cargo except passengers performing duties in the aircraft in connection with the flight.

(6) The aircraft shall not fly over any congested area of a city, town or settlement, except in accordance with procedures which have been approved by the Chief Executive in relation to that flight.

(7) The aircraft shall carry such flight crew as may be necessary to ensure the safety of the aircraft.

*[S 487/2006 wef 11/08/2006]*

*[S 278/2010 wef 15/05/2010]*

*[S 683/2018 wef 09/10/2018]*

#### B Conditions.

(1) The flight shall be made under the supervision of a person approved by the Chief Executive for the purposes of these Conditions, and subject to any additional conditions which may be specified in such approval.

SECOND SCHEDULE — *continued*

(2) If it is not registered in Singapore or under the law of any country referred to in paragraph 3 of the Order, the aircraft shall be marked in a manner approved by the Chief Executive for the purposes of these Conditions, and the provisions of paragraphs 15 and 19 of the Order shall be complied with in relation to the aircraft as if it was registered in Singapore so far as such provisions are applicable to the aircraft in the circumstances.

(3) The aircraft shall fly only for the purpose of —

- (a) experimenting with or testing the aircraft (including in particular its engines) and its equipment; or
- (b) enabling the aircraft to qualify for the issue or validation of a Certificate of Airworthiness or the approval of a modification of the aircraft; or
- (c) proceeding to or from a place at which any experiment, test, inspection or weighing of the aircraft is to take place for a purpose referred to in sub-paragraph (a) or (b).

(4) The aircraft shall carry such flight crew as may be necessary to ensure the safety of the aircraft.

(5) The aircraft shall not carry any cargo, or any person other than the flight crew except the following:

- (a) persons employed by the operator who carry out during the flight duties in connection with the purposes specified in paragraph (3);
- (b) persons employed by producers of component parts of the aircraft (including the engines) who carry out during the flight duties in connection with the purposes so specified;
- (c) persons approved by the Chief Executive under paragraph 7(10) of the Order as qualified to furnish reports for the purposes of the Order; and
- (d) persons, other than those carried under the preceding provisions of this paragraph, who are carried in the aircraft in order to carry out a technical evaluation of the aircraft or its operation.

(6) The aircraft shall not fly over any congested area of a city, town or settlement, except in accordance with procedures which have been approved by the Chief Executive in relation to that flight.

*[S 331/2005 wef 02/06/2005]*

*[S 278/2010 wef 15/05/2010]*

*[S 683/2018 wef 09/10/2018]*

SECOND SCHEDULE — *continued*

C Conditions.

(1) The operator of the aircraft shall be the registered owner of the aircraft who shall be the holder of an aircraft dealer's certificate granted under this Order.

(2) The aircraft shall fly only for the purpose of —

(a) testing the aircraft;

(b) demonstrating the aircraft with a view to the sale of that aircraft or other similar aircraft;

(c) proceeding to or from a place at which the aircraft is to be tested or demonstrated as aforesaid or overhauled, repaired or modified; or

(d) delivering the aircraft to a person who has agreed to buy or lease it.

(3) The aircraft shall fly within Singapore only.

*[S 683/2018 wef 09/10/2018]*

THIRD SCHEDULE

*(Paragraph 7)*

CATEGORIES OF AIRCRAFT

1. Categories of Aircraft.

Transport Category (Passenger).

*[Deleted by S 61/93 wef 19/03/1993]*

Transport Category (Cargo).

Aerial Work Category.

Private Category.

Special Category.

2. The purposes for which the aircraft may fly are as follows:

Transport Category (Passenger): Any purpose, other than a special purpose.

Transport Category (Cargo): Any purpose, other than the public transport of passengers or a special purpose.

Aerial Work Category: Any purpose, other than public transport or a special purpose.

Private Category: Any purpose, other than public transport, aerial work or a special purpose.



THIRD SCHEDULE — *continued*

Special Category: Any other purpose specified in the Certificate of Airworthiness, including a special purpose, but not including the carriage of passengers unless expressly permitted.

*Note:*

In this item, “special purpose” means flying an aircraft for the purpose of —

- (a) conducting performance of flight and ground tests;
- (b) demonstration flights; or
- (c) ferry flights for modifications, maintenance or delivery.

[S 61/93 wef 19/03/1993]

[S 616/2017 wef 31/10/2017]

## FOURTH SCHEDULE

[Deleted by S 487/2006 wef 11/08/2006]

## FIFTH SCHEDULE

[Deleted by S 683/2018 wef 09/10/2018]

## SIXTH SCHEDULE

[Deleted by S 683/2018 wef 09/10/2018]

## SEVENTH SCHEDULE

(Paragraph 15)

## AIRCRAFT, ENGINE AND PROPELLER LOG BOOKS

## 1. Aircraft Log Book.

The following entries shall be included in the aircraft log book:

- (a) the name of the constructor, the type of the aircraft, the number assigned to it by the constructor and the date of the construction of the aircraft;
- (b) the nationality and registration marks of the aircraft;
- (c) the name and address of the operator of the aircraft;

SEVENTH SCHEDULE — *continued*

- (d) particulars of the date and duration of each flight, or, if more than one flight was made on one day, the number of flights and total duration of flights on that day;
- (e) particulars of all maintenance work carried out on the aircraft or its equipment;
- (f) particulars of any defects occurring in the aircraft or in any equipment required to be carried therein by the Order, and of the action taken to rectify such defects including a reference to the relevant entries in the technical log;
- (g) particulars of any overhauls, repairs, replacements and modifications relating to the aircraft or any such equipment as aforesaid:

Provided that entries shall not be required to be made under sub-paragraphs (e), (f) and (g) in respect of any engine or variable pitch propeller.

## 2. Engine Log Book.

The following entries shall be included in the engine log book:

- (a) the name of the constructor, the type of the engine, the number assigned to it by the constructor and the date of the construction of the engine;
- (b) the nationality and registration marks of each aircraft in which the engine is fitted;
- (c) the name and address of the operator of each such aircraft;
- (d) particulars of the date and duration of each occasion on which the engine is run in flight, or, if the engine is run on more than one occasion on one day, the number of occasions and the total duration of the running of the engine on that day;
- (e) particulars of all maintenance work done on the engine;
- (f) particulars of any defects occurring in the engine, and of the rectification of such defects; and
- (g) particulars of all overhauls, repairs, replacements and modifications relating to the engine or any of its accessories.

## 3. Variable Pitch Propeller Log Book.

The following entries shall be included in the variable pitch propeller log book:

- (a) the name of the constructor, the type of the propeller, the number assigned to it by the constructor and the date of the construction of the propeller;

SEVENTH SCHEDULE — *continued*

- (b) the nationality and registration marks of each aircraft, and the type and number of each engine, to which the propeller is fitted;
- (c) the name and address of the operator of each such aircraft;
- (d) particulars of the date and duration of each occasion on which the propeller is run in flight, or, if the propeller is run on more than one occasion on one day, the number of occasions and the total duration of the running of the propeller on that day;
- (e) particulars of all maintenance work done on the propeller;
- (f) particulars of any defects occurring in the propeller, and of the rectification of such defects;
- (g) particulars of any overhauls, repairs, replacements and modifications relating to the propeller.

[S 683/2018 wef 09/10/2018]

## EIGHTH SCHEDULE

*Paragraph 20*

## FLIGHT CREW OF AIRCRAFT: LICENCES AND RATINGS

## PART A — LICENCES

## Minimum Age, Period of Validity, Privileges

## 1. Student Pilots

Student Pilot's Licence (All aircraft).

Minimum age — 16 years.

Maximum period of validity —

- (a) 60 months from the date the licence is granted or renewed, if the holder is less than 40 years of age on that date;
- (b) 24 months from the date the licence is granted or renewed, if the holder is 40 years of age or more but less than 50 years of age on that date;
- (c) 12 months from the date the licence is granted or renewed, if the holder is 50 years of age or more but less than 60 years of age on that date; or
- (d) 6 months from the date the licence is granted or renewed, if the holder is 60 years of age or more on that date.

Privileges: The licence —

EIGHTH SCHEDULE — *continued*

- (a) shall entitle the holder to fly as pilot-in-command of an aircraft for the purpose of becoming qualified for the grant or renewal of a pilot's licence provided that —
- (i) the holder is above the age of 16½ years; and
  - (ii) the holder does not fly the aircraft unless under the supervision of, or with the authority of, a person holding a pilot's licence granted under this Order, being a licence which includes a flying instructor's rating or an assistant flying instructor's rating entitling him to give instructions in flying the type of aircraft to be flown;
- (b) shall be valid only for flights within Singapore and within any other country specified in the licence;
- (c) shall not entitle the holder to fly as pilot-in-command of an aircraft in which any person is carried;
- (ca) shall not entitle the holder to fly on a solo flight to a foreign Contracting State as pilot-in-command of an aircraft unless there is a special or general arrangement made between Singapore and that Contracting State;
- (d) shall be valid only for flights carried out in accordance with instructions given by a person holding a pilot's licence granted under the Order, being a licence which includes a flying instructor's rating or an assistant flying instructor's rating entitling him to give instruction in flying the type of aircraft to be flown.

[S 61/93 wef 19/03/1993]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

[S 278/2010 wef 15/05/2010]

## 2. Aeroplane Pilots.

Private Pilot's Licence (Aeroplanes).

Minimum age — 17 years.

Maximum period of validity —

- (a) 60 months from the date the licence is granted or renewed, if the holder is less than 40 years of age on that date;
- (b) 24 months from the date the licence is granted or renewed, if the holder is 40 years of age or more but less than 50 years of age on that date;

EIGHTH SCHEDULE — *continued*

- (c) 12 months from the date the licence is granted or renewed, if the holder is 50 years of age or more but less than 60 years of age on that date; or
- (d) 6 months from the date the licence is granted or renewed, if the holder is 60 years of age or more on that date.

Privileges: The licence —

- (a) shall entitle the holder to fly as pilot-in-command or co-pilot of an aeroplane of any of the types specified in the aircraft rating included in the licence, when the aircraft is flying for any purpose other than public transport or aerial work;
- (b) shall not entitle the holder to act as pilot-in-command by night while carrying any passenger in the aircraft unless a night rating is included in the licence, and unless an instrument rating is included therein or he has within the immediately preceding 6 months carried out as pilot-in-command not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun is not less than 12° below the horizon; or
- (c) shall entitle the holder to act as a holder of a flight radiotelephony operator's licence.

[S 166/2002 wef 15/04/2002]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

#### Multi-crew Pilot's Licence (Aeroplanes)

Minimum age — 18 years.

Maximum period of validity\* —

- (a) 6 months from the date on which the licence is granted or renewed, if the holder is 60 years of age or more on that date; or
- (b) 12 months from the date on which the licence is granted or renewed, in any other case.

Privileges: The licence —

- (a) shall entitle the holder to exercise the privileges of a Private Pilot's Licence (Aeroplanes) which includes a night rating (*aeroplanes*);
- (b) shall entitle the holder to exercise the privileges of Instrument Rating (Aeroplanes); and

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\* In respect of the privileges of a Private Pilot's Licence the maximum period of validity shall be as given for the Multi-crew Pilot's Licence.

EIGHTH SCHEDULE — *continued*

- (c) shall entitle the holder to fly as a co-pilot of any aeroplane required to be operated with a co-pilot and which is of a type specified in Part II of the aircraft rating included in the licence, when the aeroplane is engaged in a flight for the purpose of public transport or aerial work;

Provided that he shall not, unless he has demonstrated an ability to act as pilot-in-command in a single-pilot operation exercised solely by reference to instruments, exercise the privileges of an Instrument Rating (Aeroplanes) in a single-pilot operation in aeroplanes.

[S 570/2011 wef 04/10/2011]

Commercial Pilot's Licence (Aeroplanes).

Minimum age — 18 years.

\*Maximum period of validity —

- (a) 6 months from the date on which the licence is granted or renewed, if the holder —
- (i) is 40 years of age or more on that date and is engaged in single-crew public transport of passengers; or
  - (ii) is 60 years of age or more on that date; or
- (b) 12 months from the date on which the licence is granted or renewed, in any other case.

Privileges: In addition to the privileges given above for the Private Pilot's Licence (Aeroplanes) which includes a night rating (aeroplanes), the holder of the licence shall be entitled to fly as —

- (a) pilot-in-command of any aeroplane certificated for single pilot operation and which is of a type specified in Part I of the aircraft rating included in the licence, when the aeroplane is engaged in a flight for the purpose of public transport or aerial work:

Provided that —

- (i) he shall not, unless his licence includes an instrument rating (aeroplanes), fly such an aeroplane on any scheduled journey;
- (ii) he shall not fly such an aeroplane at night unless an instrument rating (aeroplanes) is included in his licence or he has within the immediately preceding 12 months carried out as pilot-in-command not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun is not less than 12 degrees below the horizon;

EIGHTH SCHEDULE — *continued*

- (iii) he shall not, unless his licence includes an instrument rating (aeroplanes), fly any such aeroplane of which the maximum total weight authorised exceeds 2,300 kg on any flight for the purpose of public transport except a flight beginning and ending at the same aerodrome and not extending beyond 25 nautical miles from that aerodrome.
- (b) co-pilot of any aeroplane of a type specified in Parts I and II of such aircraft rating when the aeroplane is engaged in a flight for the purpose of public transport or aerial work.

\*In respect of the privileges of a Private Pilot's Licence the maximum period of validity shall be as given for the Commercial Pilot's Licence (Aeroplanes).

[S 49/1992 *wef* 01/02/1992]

[S 384/2000 *wef* 31/08/2000]

[S 487/2006 *wef* 11/08/2006]

[S 640/2006 *wef* 30/11/2006]

Airline Transport Pilot's Licence (Aeroplanes).

Minimum age — 21 years.

Maximum period of validity —

- (a) 6 months from the date on which the licence is granted or renewed, if the holder —
- (i) is 40 years of age or more on that date and is engaged in single-crew public transport of passengers; or
  - (ii) is 60 years of age or more on that date; or
- (b) 12 months from the date on which the licence is granted or renewed, in any other case.

Privileges: In addition to the privileges given above for the Commercial Pilot's Licence (Aeroplanes) which includes an instrument rating (aeroplanes), the holder of the licence shall be entitled to fly as —

- (a) pilot-in-command of any aeroplane of a type specified in Part I of the aircraft rating included in the licence when the aeroplane is engaged in a flight for the purpose of public transport or aerial work; or
- (b) co-pilot of any aeroplane of a type specified in Part I or Part II of such

EIGHTH SCHEDULE — *continued*

aircraft rating when the aeroplane is engaged in a flight for the purpose of public transport or aerial work.

[S 49/1992 wef 01/02/1992]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

## 3. Helicopter and Gyroplane Pilots

Private Pilot's Licence (Helicopters and Gyroplanes).

Minimum age — 17 years.

Maximum period of validity —

- (a) 60 months from the date the licence is granted or renewed, if the holder is less than 40 years of age on that date;
- (b) 24 months from the date the licence is granted or renewed, if the holder is 40 years of age or more but less than 50 years of age on that date;
- (c) 12 months from the date the licence is granted or renewed, if the holder is 50 years of age or more but less than 60 years of age on that date; or
- (d) 6 months from the date the licence is granted or renewed, if the holder is 60 years of age or more on that date.

Privileges: The licence —

- (a) shall entitle the holder to fly as pilot-in-command or co-pilot of any type of helicopter or gyroplane specified in the aircraft rating included in the licence when the aircraft is operated for purposes other than public transport or aerial work;
- (b) shall not entitle the holder to fly as pilot-in-command of such a gyroplane at night unless his licence includes a night rating (helicopters and gyroplanes) and he has within the immediately preceding 12 months carried out as pilot-in-command not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun is not less than 12 degrees below the horizon;
- (c) shall not entitle the holder to fly as pilot-in-command of such a helicopter at night unless —
  - (i) his licence includes a night rating (helicopters and gyroplanes); and
  - (ii) his licence includes an instrument rating (helicopters) or he has within the immediately preceding 12 months carried out as pilot-in-command not less than 5 flights, each consisting of a take-off, a



EIGHTH SCHEDULE — *continued*

transition from hover to forward flight, a climb to at least 500 feet and a landing, at a time when the depression of the centre of the sun is not less than 12 degrees below the horizon;

- (d) shall entitle the holder to act as holder of flight radiotelephony operator's licence.

[S 49/1992 wef 01/02/1992]

[S 384/2000 wef 31/08/2000]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

## Commercial Pilot's Licence (Helicopters and Gyroplanes).

Minimum age — 18 years.

\*Maximum period of validity —

- (a) 6 months from the date on which the licence is granted or renewed, if the holder —
- (i) is 40 years of age or more on that date and is engaged in single-crew public transport of passengers; or
  - (ii) is 60 years of age or more on that date; or
- (b) 12 months from the date on which the licence is granted or renewed, in any other case.

Privileges: In addition to the privileges given above for the Private Pilot's Licence (Helicopters and Gyroplanes), which includes a night rating (helicopters and gyroplanes), the holder of the licence shall be entitled to fly as —

- (a) pilot-in-command of any helicopter or gyroplane certificated for single pilot operation and which is of a type specified in Part I of the aircraft rating included in the licence when the helicopter or gyroplane is engaged in a flight for any purpose whatsoever:

Provided that —

- (i) he shall not, unless his licence includes an instrument rating (helicopters) fly such a helicopter on any scheduled journey or on any flight for the purpose of public transport in Instrument Meteorological Conditions;
- (ii) he shall not fly such a gyroplane at night unless he has within the immediately preceding 12 months carried out as pilot-in-command

EIGHTH SCHEDULE — *continued*

not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun is not less than 12 degrees below the horizon;

- (iii) he shall not fly such a helicopter at night unless his licence includes an instrument rating (helicopters) or he has within the immediately preceding 12 months carried out as pilot-in-command not less than 5 flights, each consisting of a take-off, a transition from hover to forward flight, a climb to at least 500 feet and a landing, at a time when the depression of the centre of the sun is not less than 12 degrees below the horizon;

- (b) co-pilot of any helicopter or gyroplane required to be operated with a co-pilot of a type specified in Part I or II of such aircraft rating for purposes whatsoever.

\*In respect of the privileges of a Private Pilot's Licence the maximum period of validity shall be as given for the Commercial Pilot's Licence (Helicopters and Gyroplanes).

[S 49/1992 wef 01/02/1992]

[S 384/2000 wef 31/08/2000]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

Airline Transport Pilot's Licence (Helicopters and Gyroplanes).

Minimum age — 21 years.

Maximum period of validity —

- (a) 6 months from the date on which the licence is granted or renewed, if the holder —
- (i) is 40 years of age or more on that date and is engaged in single-crew public transport of passengers; or
- (ii) is 60 years of age or more on that date; or
- (b) 12 months from the date on which the licence is granted or renewed, in any other case.

Privileges: In addition to the privileges given above for the Commercial Pilot's Licence (Helicopters and Gyroplanes), the holder of the licence shall be entitled to fly as —

- (a) pilot-in-command of any helicopter or gyroplane of a type specified in Part I of the aircraft rating included in the licence when the aircraft is engaged on a flight for any purpose whatsoever.

EIGHTH SCHEDULE — *continued*

- (b) co-pilot of any helicopter or gyroplane required to be operated with a co-pilot of a type specified in Part I or II of such aircraft rating for any purpose whatsoever.

[S 49/1992 wef 01/02/1992]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

## 4. Balloon and Airship Pilots

Minimum age — 17 years.

Maximum period of validity —

- (a) 60 months from the date the licence is granted or renewed, if the holder is less than 40 years of age on that date;
- (b) 24 months from the date the licence is granted or renewed, if the holder is 40 years of age or more but less than 50 years of age on that date;
- (c) 12 months from the date the licence is granted or renewed, if the holder is 50 years of age or more but less than 60 years of age on that date; or
- (d) 6 months from the date the licence is granted or renewed, if the holder is 60 years of age or more on that date.

Privileges: The licence —

- (a) shall entitle the holder to fly, when the balloon or airship is flying for any purpose other than public transport or aerial work, as —
- (i) pilot-in-command of any type of balloon or airship specified in Part I of the aircraft type rating included in the licence;
  - (ii) co-pilot of any type of balloon or airship specified in Part I or Part II of such aircraft rating; and
- (b) shall entitle the holder to act as a holder of a flight radiotelephony operator's licence.

[S 166/2002 wef 15/04/2002]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

[S 423/2010 wef 02/08/2010]

Commercial Pilot's Licence (Balloons).

Minimum age — 18 years.

EIGHTH SCHEDULE — *continued*

\*Maximum period of validity —

- (a) 60 months from the date the licence is granted or renewed, if the holder is less than 40 years of age on that date;
- (b) 24 months from the date the licence is granted or renewed, if the holder is 40 years of age or more but less than 50 years of age on that date;
- (c) 12 months from the date the licence is granted or renewed, if the holder is 50 years of age or more but less than 60 years of age on that date; or
- (d) 6 months from the date the licence is granted or renewed, if the holder is 60 years of age or more on that date.

Privileges: In addition to the privileges given above for the Private Pilot's Licence in respect of balloons, the holder of the licence shall be entitled to fly as pilot-in-command or co-pilot of any type of balloon specified in the aircraft rating included in the licence.

\*In respect of the privileges of a Private Pilot's Licence the maximum period of validity shall be as given for the Commercial Pilot's Licence (Balloons).

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

[S 570/2011 wef 04/10/2011]

Commercial Pilot's Licence (Airships).

Minimum age — 18 years.

\*Maximum period of validity —

- (a) 6 months from the date on which the licence is granted or renewed, if the holder —
  - (i) is 40 years of age or more on that date and is engaged in single-crew public transport of passengers; or
  - (ii) is 60 years of age or more on that date; or
- (b) 12 months from the date on which the licence is granted or renewed, in any other case.

Privileges: In addition to the privileges given above for the Private Pilot's Licence in respect of airships, the holder of the licence shall be entitled to fly as —

- (a) pilot-in-command of any airship of a type specified in Part I of the aircraft rating included in the licence; or

EIGHTH SCHEDULE — *continued*

(b) co-pilot of any airship of a type specified in Part II of such aircraft rating.

\*In respect of the privileges of a Private Pilot's Licence the maximum period of validity shall be as given for the Commercial Pilot's Licence (Airships).

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

[S 423/2010 wef 02/08/2010]

[S 570/2011 wef 04/10/2011]

## 5. Glider Pilots.

Commercial Pilot's Licence (Glanders).

Minimum age — 18 years.

Maximum period of validity —

- (a) 60 months from the date the licence is granted or renewed, if the holder is less than 40 years of age on that date;
- (b) 24 months from the date the licence is granted or renewed, if the holder is 40 years of age or more but less than 50 years of age on that date;
- (c) 12 months from the date the licence is granted or renewed, if the holder is 50 years of age or more but less than 60 years of age on that date; or
- (d) 6 months from the date the licence is granted or renewed, if the holder is 60 years of age or more on that date.

Privileges: The licence —

- (a) shall entitle the holder to fly as pilot-in-command or co-pilot of —
  - (i) any glider of which the maximum total weight authorised does not exceed 680 kg;
  - (ii) any glider of which the maximum total weight authorised exceeds 680 kg and which is of a type specified in the rating included in the licence; and
- (b) shall entitle the holder to act as a holder of a flight radiotelephony operator's licence.

[S 166/2002 wef 15/04/2002]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

## 6. Other Flight Crew

EIGHTH SCHEDULE — *continued*

Flight Radiotelephony Operator's Licence.

Minimum age — 16 years.

Maximum period of validity — Where the holder of the licence is also the holder of a pilot's licence, the period of validity that is stipulated in the pilot's licence. In any other case, 24 months.

Privileges: The holder of the licence is entitled to operate radiotelephony apparatus in any aircraft.

*[S 497/2019 wef 15/07/2019]*

## PART B — RATINGS

1. The following ratings may be included in a pilot's licence (other than a student pilot's licence) granted under Part IV of the Order, and, subject to the provisions of the Order and of the licence, the inclusion of a rating in a licence shall have the consequences respectively specified as follows:

Aircraft Rating. The licence shall entitle the holder to act as pilot of aircraft of the types specified in the aircraft rating and different types of aircraft may be specified in respect of different privileges of a licence.

*[Deleted by S 384/2000 wef 31/08/2000]*

Instrument Rating (Aeroplanes) shall entitle the holder of the licence to act as pilot-in-command or co-pilot of an aeroplane flying in controlled airspace in circumstances which require compliance with the Instrument Flight Rules.

Instrument Rating (Helicopters) shall entitle the holder of the licence to act as pilot-in-command or co-pilot of a helicopter flying in controlled airspace in circumstances which require compliance with the Instrument Flight Rules.

Night Rating (Private Pilot's Licence — Aeroplanes) shall entitle the holder of a private pilot's licence to act as pilot-in-command of an aeroplane carrying passengers by night.

Night Rating (Helicopters and Gyroplanes) shall entitle the holder of a private pilot's licence (helicopters) to act as pilot-in-command of a helicopter in which any passenger is carried.

*[Deleted by S 423/2010 wef 02/08/2010]*

Flying Instructor's Rating shall entitle the holder of the licence to give instruction in flying aircraft of such types as may be specified in the rating for that purpose. The maximum period of validity of a Flying Instructor's Rating shall be 24 months, or 12 months for a person who is 65 years of age or older.

EIGHTH SCHEDULE — *continued*

Assistant Flying Instructor's Rating shall entitle the holder of the licence to give instruction in flying aircraft of such types as may be specified in the rating for that purpose, subject to the following requirements:

- (a) such instruction shall only be given under the supervision of a person who is present during the take-off and landing at the aerodrome at which the instruction is to begin and end and who holds a pilot's licence endorsed with a flying instructor's rating; and
- (b) an Assistant Flying Instructor's Rating shall not entitle the holder of the licence to give directions to the person undergoing instruction in respect of the performance by that person of —
  - (i) his first solo flight by day;
  - (ii) his first solo flight by night;
  - (iii) his first solo cross-country flight by day;
  - (iv) his first solo cross-country flight by night; and
  - (v) his flight as part of any Multi-crew Pilot Licence course of training or instruction that has been approved under paragraph 20(13).

The maximum period of validity of an Assistant Flying Instructor's Rating shall be 12 months.

Class ratings are established for aeroplanes certificated for single-pilot operation and comprise —

- (a) single-engine, land;
- (b) single-engine, sea;
- (c) multi-engine, land; and
- (d) multi-engine, sea.

Type ratings are established for —

- (a) each type of aircraft certificated for operation with a minimum crew of at least two pilots;
- (b) each type of helicopter certificated for single-pilot operation except where a class rating has been issued; and
- (c) any type of aircraft whenever considered necessary by the Chief Executive.

EIGHTH SCHEDULE — *continued*

When an applicant demonstrates skill and knowledge for the initial issue of a pilot licence, the category and the ratings appropriate to the class or type of aircraft used in the demonstration shall be entered on the licence.

2. *[Deleted by S 497/2019 wef 15/07/2019]*

3. For the purposes of this Schedule —

“solo flight” means a flight on which the pilot of the aircraft is not accompanied by a person holding a pilot’s licence granted or rendered valid under the Order;

“cross-country flight” means any flight during the course of which the aircraft is more than 46.3 km from the aerodrome of departure.

*[S 497/2019 wef 15/07/2019]*

*[S 49/92 wef 01/02/1992]*

*[S 384/2000 wef 31/08/2000]*

*[S 278/2010 wef 15/05/2010]*

*[S 423/2010 wef 02/08/2010]*

*[S 570/2011 wef 04/10/2011]*

*[S 683/2018 wef 09/10/2018]*

## NINTH SCHEDULE

*[Deleted by S 683/2018 wef 09/10/2018]*

## TENTH SCHEDULE

*[Deleted by S 683/2018 wef 09/10/2018]*

## ELEVENTH SCHEDULE

Paragraph 62

## PART I

## INTERNATIONAL STANDARDS

**CHAPTER 1. DEFINITIONS**



ELEVENTH SCHEDULE — *continued*

When the following terms are used in the International Standards for Rules of the Air, they have the following meanings:

***Acrobatic flight.*** Manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

***ADS-C agreement.*** A reporting plan which establishes the conditions of ADS-C data reporting (i.e. data required by the air traffic services unit and frequency of ADS-C reports which have to be agreed to prior to using ADS-C in the provision of air traffic services).

***Advisory airspace.*** An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

***Advisory route.*** A designated route along which air traffic advisory service is available.

***Aerodrome.*** A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

***Aerodrome control service.*** Air traffic control service for aerodrome traffic.

***Aerodrome control tower.*** A unit established to provide air traffic control service to aerodrome traffic.

***Aerodrome traffic.*** All traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

***Aerodrome traffic zone.*** An airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

***Aeronautical Information Publication (AIP).*** A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

***Aeronautical station (RR SI.81).*** A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board a ship or on a platform at sea.

***Aeroplane.*** 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.

***Airborne collision avoidance system (ACAS).*** An aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

ELEVENTH SCHEDULE — *continued*

**Aircraft.** Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

**Air-ground control radio station.** An aeronautical telecommunication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area.

**Air-taxiing.** Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).

**Air traffic.** All aircraft in flight or operating on the manoeuvring area of an aerodrome.

**Air traffic advisory service.** A service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans.

**Air traffic control clearance.** Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

**Air traffic control service.** A service provided for the purpose of:

- a) preventing collisions:
  - 1) between aircraft, and
  - 2) on the manoeuvring area between aircraft and obstructions, and
- b) expediting and maintaining an orderly flow of air traffic.

**Air traffic control unit.** A generic term meaning variously, area control centre, approach control unit or aerodrome control tower.

**Air traffic service.** A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

**Air traffic services airspaces.** Airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

**Air traffic services reporting office.** A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

**Air traffic services unit.** A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

**Airway.** A control area or portion thereof established in the form of a corridor.

ELEVENTH SCHEDULE — *continued*

**Alerting service.** A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

[Deleted by S 21/2015 wef 26/01/2015]

**Altitude.** The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).

**Approach control service.** Air traffic control service for arriving or departing controlled flights.

**Approach control unit.** A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

[Deleted by S 589/2016 wef 18/11/2016]

**Appropriate authority.**

- a) *Regarding flight over the high seas:* The relevant authority of the State of Registry.
- b) *Regarding flight other than over the high seas:* The relevant authority of the State having sovereignty over the territory being overflown.

**Apron.** A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

**Area control centre.** A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

**Area control service.** Air traffic control service for controlled flights in control areas.

**Area navigation (RNAV).** A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

[Deleted by S 589/2016 wef 18/11/2016]

**Automatic dependent surveillance — broadcast (ADS-B).** A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

**Automatic dependent surveillance — contract (ADS-C).** A means by which the terms of an ADS-C agreement will be exchanged between the ground system and

ELEVENTH SCHEDULE — *continued*

the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

**Ceiling.** The height above the ground or water of the base of the lowest layer of cloud below 6 000 metres (20 000 feet) covering more than half the sky.

**Changeover point.** The point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omnidirectional radio ranges is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft.

**Clearance limit.** The point to which an aircraft is granted an air traffic control clearance.

**Control area.** A controlled airspace extending upwards from a specified limit above the earth.

**Controlled aerodrome.** An aerodrome at which air traffic control service is provided to aerodrome traffic.

**Controlled airspace.** An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

**Controlled flight.** Any flight which is subject to an air traffic control clearance.

**Controller-pilot data link communications (CPDLC).** A means of communication between controller and pilot, using data link for ATC communications.

**Control zone.** A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

**Cruise climb.** An aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases.

**Cruising level.** A level maintained during a significant portion of a flight.

**Current flight plan.** The flight plan, including changes, if any, brought about by subsequent clearances.

[Deleted by S 351/2015 wef 02/06/2015]

**Data link communications.** A form of communication intended for the exchange of messages via a data link.

**Estimated off-block time.** The estimated time at which the aircraft will commence movement associated with departure.

**Estimated time of arrival.** For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure

ELEVENTH SCHEDULE — *continued*

will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

***Expected approach time.*** The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding fix to complete its approach for a landing.

***Filed flight plan.*** The flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes.

***Flight crew member.*** A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

***Flight information centre.*** A unit established to provide flight information service and alerting service.

***Flight information region.*** An airspace of defined dimensions within which flight information service and alerting service are provided.

***Flight information service.*** A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

***Flight level.*** A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

***Flight plan.*** Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

***Flight visibility.*** The visibility forward from the cockpit of an aircraft in flight.

***Ground visibility.*** The visibility at an aerodrome as reported by an accredited observer or by automatic systems.

***Heading.*** The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid).

***Height.*** The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

***IFR.*** The symbol used to designate the instrument flight rules.

***IFR flight.*** A flight conducted in accordance with the instrument flight rules.

***IMC.*** The symbol used to designate instrument meteorological conditions.

***Instrument approach procedure.*** An instrument approach procedure is as defined in paragraph 2 of Part I of the Order, and is classified as follows:

ELEVENTH SCHEDULE — *continued*

*Non-precision approach (NPA) procedure.* An instrument approach procedure designed for 2D instrument approach operations Type A.

*Approach procedure with vertical guidance (APV).* A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

*Precision approach (PA) procedure.* An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or Type B.

Where:

A Type A instrument approach operation refers to an instrument approach operation where the minimum descent height (MDH) or decision height (DH) is at or above 75 m (250 ft).

A Type B instrument approach operation refers to an instrument approach operation where the minimum descent height (MDH) or decision height (DH) is below 75 m (250 ft), and is further determined by the category of operation.

***Instrument meteorological conditions.*** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

***Landing area.*** That part of a movement area intended for the landing or take-off of aircraft.

***Level.*** A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

***Manoeuvring area.*** That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

***Movement area.*** That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

***Pilot-in-command.*** 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.

***Pressure-altitude.*** An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

***Problematic use of substances.*** The use of one or more psychoactive substances by aviation personnel in a way that:

- a) constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or

ELEVENTH SCHEDULE — *continued*

- b) causes or worsens an occupational, social, mental or physical problem or disorder.

[Deleted by S 351/2015 wef 02/06/2015]

**Psychoactive substances.** Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

**Radiotelephony.** A form of radiocommunication primarily intended for the exchange of information in the form of speech.

**Repetitive flight plan (RPL).** A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

**Reporting point.** A specified geographical location in relation to which the position of an aircraft can be reported.

[Deleted by S 351/2015 wef 02/06/2015]

**Runway.** A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

**Runway-holding position.** A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

**Safety-sensitive personnel.** 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.

**Signal area.** An area on an aerodrome used for the display of ground signals.

**Special VFR flight.** A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

**Taxiing.** Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

**Taxiway.** A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

- a) Aircraft stand taxilane. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.
- b) Apron taxiway. A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.

ELEVENTH SCHEDULE — *continued*

- c) Rapid exit taxiway. A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

**Terminal control area.** A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes.

**Total estimated elapsed time.** For IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from take-off to arrive over the destination aerodrome.

**Track.** The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

**Traffic avoidance advice.** Advice provided by an air traffic services unit specifying manoeuvres to assist a pilot to avoid a collision.

**Traffic information.** Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

**Transition altitude.** The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

**Unmanned free balloon.** A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

**VFR.** The symbol used to designate the visual flight rules.

**VFR flight.** A flight conducted in accordance with the visual flight rules.

**Visibility.** Visibility for aeronautical purposes is the greater of:

- a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;
- b) the greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background.

**Visual meteorological conditions.** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.



ELEVENTH SCHEDULE — *continued*

**VMC.** The symbol used to designate visual meteorological conditions.

[S 21/2015 wef 26/01/2015]

[S 351/2015 wef 02/06/2015]

[S 589/2016 wef 18/11/2016]

**CHAPTER 2. APPLICABILITY OF THE RULES OF THE AIR****2.1 Territorial application of the rules of the air**

2.1.1 The rules of the air shall apply to aircraft bearing the nationality and registration marks of a Contracting State, wherever they may be, to the extent that they do not conflict with the rules published by the State having jurisdiction over the territory overflown.

2.1.2 If, and so long as, a Contracting State has not notified the International Civil Aviation Organization to the contrary, it shall be deemed, as regards aircraft of its registration, to have agreed as follows:

For purposes of flight over those parts of the high seas where a Contracting State has accepted, pursuant to a regional air navigation agreement, the responsibility of providing air traffic services, the “appropriate ATS authority” referred to in this Part is the relevant authority designated by the State responsible for providing those services.

**2.2 Compliance with the rules of the air**

The operation of an aircraft either in flight or on the movement area of an aerodrome shall be in compliance with the general rules and, in addition, when in flight, either with:

- a) the visual flight rules; or
- b) the instrument flight rules.

**2.3 Responsibility of compliance with the rules of the air****2.3.1 Responsibility of pilot-in-command**

The pilot-in-command of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with the rules of the air, except that the pilot-in-command may depart from these rules in circumstances that render such departure absolutely necessary in the interests of safety.

**2.3.2 Pre-flight action**

Before beginning a flight, the pilot-in-command of an aircraft shall become familiar with all available information appropriate to the intended operation. Pre-

ELEVENTH SCHEDULE — *continued*

flight action for flights away from the vicinity of an aerodrome, and for all IFR flights, shall include a careful study of available current weather reports and forecasts, taking into consideration fuel requirements and an alternative course of action if the flight cannot be completed as planned.

**2.4 Authority of pilot-in-command of an aircraft**

The pilot-in-command of an aircraft shall have final authority as to the disposition of the aircraft while in command.

**2.5 Problematic use of psychoactive substances**

No person whose function is critical to the safety of aviation (safety-sensitive personnel) shall undertake that function while under the influence of any psychoactive substance, by reason of which human performance is impaired. No such person shall engage in any kind of problematic use of substances.

*[S 729/2010 wef 01/12/2010]*

**CHAPTER 3. GENERAL RULES****3.1 Protection of persons and property****3.1.1 Negligent or reckless operation of aircraft**

An aircraft shall not be operated in a negligent or reckless manner so as to endanger life or property of others.

**3.1.2 Minimum heights**

Except when necessary for take-off or landing, or except by permission from the appropriate authority, aircraft shall not be flown over the congested areas of cities, towns or settlements or over an open-air assembly of persons, unless at such a height as will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property on the surface.

**3.1.3 Cruising levels**

The cruising levels at which a flight or a portion of a flight is to be conducted shall be in terms of:

- a) flight levels, for flights at or above the lowest usable flight level or, where applicable, above the transition altitude;
- b) altitudes, for flights below the lowest usable flight level or, where applicable, at or below the transition altitude.

**3.1.4 Dropping or spraying**

ELEVENTH SCHEDULE — *continued*

Nothing shall be dropped or sprayed from an aircraft in flight except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

## 3.1.5 Towing

No aircraft or other object shall be towed by an aircraft, except in accordance with requirements prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

## 3.1.6 Parachute descents

Parachute descents, other than emergency descents, shall not be made except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

## 3.1.7 Acrobatic flight

No aircraft shall be flown acrobatically except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

## 3.1.8 Formation flights

Aircraft shall not be flown in formation except by prearrangement among the pilots-in-command of the aircraft taking part in the flight and, for formation flight in controlled airspace, in accordance with the conditions prescribed by the appropriate ATS authority(ies). These conditions shall include the following:

- a) the formation operates as a single aircraft with regard to navigation and position reporting;
- b) separation between aircraft in the flight shall be the responsibility of the flight leader and the pilots-in-command of the other aircraft in the flight and shall include periods of transition when aircraft are manoeuvring to attain their own separation within the formation and during join-up and breakaway; and
- c) a distance not exceeding 1 km (0.5 NM) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each aircraft.

## 3.1.9 Unmanned free balloons

ELEVENTH SCHEDULE — *continued*

An unmanned free balloon shall be operated in such a manner as to minimize hazards to persons, property or other aircraft and in accordance with the conditions specified in Appendix 4.

## 3.1.10 Prohibited areas and restricted areas

Aircraft shall not be flown in a prohibited area, or in a restricted area, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the State over whose territory the areas are established.

**3.2 Avoidance of collisions**

Nothing in these rules shall relieve the pilot-in-command of an aircraft from the responsibility of taking such action, including collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment, as will best avert collision.

## 3.2.1 Proximity

An aircraft shall not be operated in such proximity to other aircraft as to create a collision hazard.

## 3.2.2 Right-of-way

The aircraft that has the right-of-way shall maintain its heading and speed.

3.2.2.1 An aircraft that is obliged by the following rules to keep out of the way of another shall avoid passing over, under or in front of the other, unless it passes well clear and takes into account the effect of aircraft wake turbulence.

3.2.2.2 *Approaching head-on.* When two aircraft are approaching head-on or approximately so and there is danger of collision, each shall alter its heading to the right.

3.2.2.3 *Converging.* When two aircraft are converging at approximately the same level, the aircraft that has the other on its right shall give way, except as follows:

- a) power-driven heavier-than-air aircraft shall give way to airships, gliders and balloons;
- b) airships shall give way to gliders and balloons;
- c) gliders shall give way to balloons;
- d) power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.

3.2.2.4 *Overtaking.* An overtaking aircraft is an aircraft that approaches another from the rear on a line forming an angle of less than 70 degrees with the plane of

ELEVENTH SCHEDULE — *continued*

symmetry of the latter, i.e. is in such a position with reference to the other aircraft that at night it should be unable to see either of the aircraft's left (port) or right (starboard) navigation lights. An aircraft that is being overtaken has the right-of-way and the overtaking aircraft, whether climbing, descending or in horizontal flight, shall keep out of the way of the other aircraft by altering its heading to the right, and no subsequent change in the relative positions of the two aircraft shall absolve the overtaking aircraft from this obligation until it is entirely past and clear.

### 3.2.2.5 *Landing*

3.2.2.5.1 An aircraft in flight, or operating on the ground or water, shall give way to aircraft landing or in the final stages of an approach to land.

3.2.2.5.2 When two or more heavier-than-air aircraft are approaching an aerodrome for the purpose of landing, aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in in front of another which is in the final stages of an approach to land, or to overtake that aircraft. Nevertheless, power-driven heavier-than-air aircraft shall give way to gliders.

3.2.2.5.3 *Emergency landing.* An aircraft that is aware that another is compelled to land shall give way to that aircraft.

3.2.2.6 *Taking off.* An aircraft taxiing on the manoeuvring area of an aerodrome shall give way to aircraft taking off or about to take off.

### 3.2.2.7 *Surface movement of aircraft.*

3.2.2.7.1 In case of danger of collision between two aircraft taxiing on the movement area of an aerodrome the following shall apply:

- a) when two aircraft are approaching head on, or approximately so, each shall stop or where practicable alter its course to the right so as to keep well clear;
- b) when two aircraft are on a converging course, the one which has the other on its right shall give way;
- c) an aircraft which is being overtaken by another aircraft shall have the right-of-way and the overtaking aircraft shall keep well clear of the other aircraft.

3.2.2.7.2 An aircraft taxiing on the manoeuvring area shall stop and hold at all runway-holding positions unless otherwise authorized by the aerodrome control tower.

ELEVENTH SCHEDULE — *continued*

3.2.2.7.3 An aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars and may proceed further when the lights are switched off.

3.2.3 Lights to be displayed by aircraft

3.2.3.1 Except as provided by 3.2.3.5, from sunset to sunrise or during any other period which may be prescribed by the appropriate authority all aircraft in flight shall display:

- a) anti-collision lights intended to attract attention to the aircraft; and
- b) navigation lights intended to indicate the relative path of the aircraft to an observer and other lights shall not be displayed if they are likely to be mistaken for these lights.

3.2.3.2 Except as provided by 3.2.3.5, from sunset to sunrise or during any other period prescribed by the appropriate authority:

- a) all aircraft moving on the movement area of an aerodrome shall display navigation lights intended to indicate the relative path of the aircraft to an observer and other lights shall not be displayed if they are likely to be mistaken for these lights;
- b) unless stationary and otherwise adequately illuminated, all aircraft on the movement area of an aerodrome shall display lights intended to indicate the extremities of their structure;
- c) all aircraft operating on the movement area of an aerodrome shall display lights intended to attract attention to the aircraft; and
- d) all aircraft on the movement area of an aerodrome whose engines are running shall display lights which indicate that fact.

3.2.3.3 Except as provided by 3.2.3.5, all aircraft in flight and fitted with anti-collision lights to meet the requirement of 3.2.3.1 a) shall display such lights also outside the period specified in 3.2.3.1.

3.2.3.4 Except as provided by 3.2.3.5, all aircraft:

- a) operating on the movement area of an aerodrome and fitted with anti-collision lights to meet the requirement of 3.2.3.2 c); or
- b) on the movement area of an aerodrome and fitted with lights to meet the requirement of 3.2.3.2 d);

shall display such lights also outside the period specified in 3.2.3.2.

3.2.3.5 A pilot shall be permitted to switch off or reduce the intensity of any flashing lights fitted to meet the requirements of 3.2.3.1, 3.2.3.2, 3.2.3.3 and 3.2.3.4 if they do or are likely to:

ELEVENTH SCHEDULE — *continued*

- a) adversely affect the satisfactory performance of duties; or
- b) subject an outside observer to harmful dazzle.

## 3.2.4 Simulated instrument flights

An aircraft shall not be flown under simulated instrument flight conditions unless:

- a) fully functioning dual controls are installed in the aircraft; and
- b) a qualified pilot occupies a control seat to act as safety pilot for the person who is flying under simulated instrument conditions. The safety pilot shall have adequate vision forward and to each side of the aircraft, or a competent observer in communication with the safety pilot shall occupy a position in the aircraft from which the observer's field of vision adequately supplements that of the safety pilot.

## 3.2.5 Operation on and in the vicinity of an aerodrome

An aircraft operated on or in the vicinity of an aerodrome shall, whether or not within an aerodrome traffic zone:

- a) observe other aerodrome traffic for the purpose of avoiding collision;
- b) conform with or avoid the pattern of traffic formed by other aircraft in operation;
- c) make all turns to the left, when approaching for a landing and after taking off, unless otherwise instructed;
- d) land and take off into the wind unless safety, the runway configuration, or air traffic considerations determine that a different direction is preferable.

## 3.2.6 Water operations

3.2.6.1 When two aircraft or an aircraft and a vessel are approaching one another and there is a risk of collision, the aircraft shall proceed with careful regard to existing circumstances and conditions including the limitations of the respective craft.

3.2.6.1.1 *Converging.* An aircraft which has another aircraft or a vessel on its right shall give way so as to keep well clear.

3.2.6.1.2 *Approaching head-on.* An aircraft approaching another aircraft or a vessel head-on, or approximately so, shall alter its heading to the right to keep well clear.

3.2.6.1.3 *Overtaking.* The aircraft or vessel which is being overtaken has the right of way, and the one overtaking shall alter its heading to keep well clear.

ELEVENTH SCHEDULE — *continued*

3.2.6.1.4 *Landing and taking off.* Aircraft landing on or taking off from the water shall, in so far as practicable, keep well clear of all vessels and avoid impeding their navigation.

3.2.6.2 *Lights to be displayed by aircraft on the water.* Between sunset and sunrise or such other period between sunset and sunrise as may be prescribed by the appropriate authority, all aircraft on the water shall display lights as required by the International Regulations for Preventing Collisions at Sea (revised 1972) unless it is impractical for them to do so, in which case they shall display lights as closely similar as possible in characteristics and position to those required by the International Regulations.

### 3.3 Flight Plans

#### 3.3.1 Submission of a flight plan

3.3.1.1 Information relative to an intended flight or portion of a flight, to be provided to air traffic services units, shall be in the form of a flight plan.

3.3.1.2 A flight plan shall be submitted prior to operating:

- a) any flight or portion thereof to be provided with air traffic control service;
- b) any IFR flight within advisory airspace;
- c) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATS authority to facilitate the provision of flight information, alerting and search and rescue services;
- d) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATS authority to facilitate coordination with appropriate military units or with air traffic services units in adjacent States in order to avoid the possible need for interception for the purpose of identification;
- e) any flight across international borders.

3.3.1.3 A flight plan shall be submitted, before departure, to an air traffic services reporting office or, during flight, transmitted to the appropriate air traffic services unit or air-ground control radio station, unless arrangements have been made for submission of repetitive flight plans.

3.3.1.4 Unless otherwise prescribed by the appropriate ATS authority, a flight plan for a flight to be provided with air traffic control service or air traffic advisory service shall be submitted at least sixty minutes before departure, or, if submitted during flight, at a time which will ensure its receipt by the appropriate



ELEVENTH SCHEDULE — *continued*

air traffic services unit at least ten minutes before the aircraft is estimated to reach:

- a) the intended point of entry into a control area or advisory area; or
- b) the point of crossing an airway or advisory route.

## 3.3.2 Contents of a flight plan

A flight plan shall comprise information regarding such of the following items as are considered relevant by the appropriate ATS authority:

- Aircraft identification
- Flight rules and type of flight
- Number and type(s) of aircraft and wake turbulence category
- Equipment
- Departure aerodrome
- Estimated off-block time
- Cruising speed(s)
- Cruising level(s)
- Route to be followed
- Destination aerodrome and total estimated elapsed time
- Alternate aerodrome(s)
- Fuel endurance
- Total number of persons on board
- Emergency and survival equipment
- Other information.

## 3.3.3 Completion of a flight plan

3.3.3.1 Whatever the purpose for which it is submitted, a flight plan shall contain information, as applicable, on relevant items up to and including “Alternate aerodrome(s)” regarding the whole route or the portion thereof for which the flight plan is submitted.

3.3.3.2 It shall, in addition, contain information, as applicable, on all other items when so prescribed by the appropriate ATS authority or when otherwise deemed necessary by the person submitting the flight plan.

## 3.3.4 Changes to a flight plan

ELEVENTH SCHEDULE — *continued*

Subject to the provisions of 3.6.2.2, all changes to a flight plan submitted for an IFR flight, or a VFR flight operated as a controlled flight, shall be reported as soon as practicable to the appropriate air traffic services unit. For other VFR flights, significant changes to a flight plan shall be reported as soon as practicable to the appropriate air traffic services unit.

## 3.3.5 Closing a flight plan

3.3.5.1 Unless otherwise prescribed by the appropriate ATS authority, a report of arrival shall be made in person, by radiotelephony or via data link at the earliest possible moment after landing, to the appropriate air traffic services unit at the arrival aerodrome, by any flight for which a flight plan has been submitted covering the entire flight or the remaining portion of a flight to the destination aerodrome.

3.3.5.2 When a flight plan has been submitted only in respect of a portion of a flight, other than the remaining portion of a flight to destination, it shall, when required, be closed by an appropriate report to the relevant air traffic services unit.

3.3.5.3 When no air traffic services unit exists at the arrival aerodrome, the arrival report, when required, shall be made as soon as practicable after landing and by the quickest means available to the nearest air traffic services unit.

3.3.5.4 When communication facilities at the arrival aerodrome are known to be inadequate and alternate arrangements for the handling of arrival reports on the ground are not available, the following action shall be taken. Immediately prior to landing the aircraft shall, if practicable, transmit to the appropriate air traffic services unit, a message comparable to an arrival report, where such a report is required. Normally, this transmission shall be made to the aeronautical station serving the air traffic services unit in charge of the flight information region in which the aircraft is operated.

3.3.5.5 Arrival reports made by aircraft shall contain the following elements of information:

- a) aircraft identification;
- b) departure aerodrome;
- c) destination aerodrome (only in the case of a diversionary landing);
- d) arrival aerodrome;
- e) time of arrival.

**3.4 Signals**

ELEVENTH SCHEDULE — *continued*

3.4.1 Upon observing or receiving any of the signals given in Appendix 1, aircraft shall take such action as may be required by the interpretation of the signal given in that Appendix.

3.4.2 The signals of Appendix 1 shall, when used, have the meaning indicated therein. They shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.

3.4.3 A signalman shall be responsible for providing standard marshalling signals to aircraft in a clear and precise manner using the signals shown in Appendix 1.

3.4.4 No person shall guide an aircraft unless trained, qualified and approved by the appropriate authority to carry out the functions of a signalman.

3.4.5 The signalman shall wear a distinctive fluorescent identification vest to allow the flight crew to identify that he or she is the person responsible for the marshalling operation.

3.4.6 Daylight-fluorescent wands, table-tennis bats or gloves shall be used for all signalling by all participating ground staff during daylight hours. Illuminated wands shall be used at night or in low visibility.

**3.5 Time**

3.5.1 Coordinated Universal Time (UTC) shall be used and shall be expressed in hours and minutes and, when required, seconds of the 24-hour day beginning at midnight.

3.5.2 A time check shall be obtained prior to operating a controlled flight and at such other times during the flight as may be necessary.

3.5.3 Wherever time is utilized in the application of data link communications, it shall be accurate to within 1 second of UTC.

**3.6 Air traffic control service****3.6.1 Air traffic control clearances**

3.6.1.1 An air traffic control clearance shall be obtained prior to operating a controlled flight, or a portion of a flight as a controlled flight. Such clearance shall be requested through the submission of a flight plan to an air traffic control unit.

3.6.1.2 Whenever an aircraft has requested a clearance involving priority, a report explaining the necessity for such priority shall be submitted, if requested by the appropriate air traffic control unit.

ELEVENTH SCHEDULE — *continued*

3.6.1.3 *Potential reclearance in flight.* If prior to departure it is anticipated that depending on fuel endurance and subject to reclearance in flight, a decision may be taken to proceed to a revised destination aerodrome, the appropriate air traffic control units shall be so notified by the insertion in the flight plan of information concerning the revised route (where known) and the revised destination.

3.6.1.4 An aircraft operated on a controlled aerodrome shall not taxi on the manoeuvring area without clearance from the aerodrome control tower and shall comply with any instructions given by that unit.

## 3.6.2 Adherence to current flight plan

3.6.2.1 Except as provided for in 3.6.2.4, an aircraft must adhere to the current flight plan or the applicable portion of the current flight plan for a controlled flight in accordance with 3.6.2.1.1 to 3.6.2.2 unless a request for a change has been made and clearance is obtained from the appropriate air traffic control unit, or unless an emergency situation has arisen which necessitates immediate action by the aircraft, in which event as soon as circumstances permit, after such emergency authority is exercised, the appropriate air traffic services unit must be notified of the action taken and that this action has been taken under emergency authority.

3.6.2.1.1 Unless otherwise authorized by the appropriate ATS authority, or directed by the appropriate air traffic control unit, controlled flights shall, in so far as practicable:

- a) when on an established ATS route, operate along the defined centre line of that route; or
- b) when on any other route, operate directly between the navigation facilities and/or points defining that route.

3.6.2.1.2 Subject to the overriding requirement in 3.6.2.1.1, an aircraft operating along an ATS route segment defined by reference to very high frequency omnidirectional radio ranges shall change over for its primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the changeover point, where established.

3.6.2.1.3 Deviation from the requirements in 3.6.2.1.1 shall be notified to the appropriate air traffic services unit.

3.6.2.2 *Deviations from the current flight plan.* In the event that a controlled flight deviates from its current flight plan, the following action must be taken:

- (a) *Deviation from track:* if the aircraft is off track, the pilot-in-command must take action forthwith to adjust the heading of the aircraft to regain track as soon as practicable.

ELEVENTH SCHEDULE — *continued*

- (b) *Deviation from ATC assigned Mach number or indicated airspeed*: the appropriate air traffic services unit must be informed immediately.
- (c) *Deviation from Mach number or true airspeed*: if the sustained Mach number at cruising level varies by Mach 0.02 or more, or the true airspeed at cruising level varies 19 km/h (10 kt) or more, from the Mach number or true airspeed specified in the current flight plan, the appropriate air traffic services must be so informed.
- (d) *Change in time estimate*: except where ADS-C is activated and serviceable in airspace where ADS-C services are provided, the flight crew must notify the appropriate air traffic services unit as soon as possible if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, changes in excess of —
  - (i) 2 minutes from that previously notified to air traffic services; or
  - (ii) such other period of time as is specified by the appropriate ATS authority or on the basis of regional air navigation agreements.

3.6.2.2.1 When ADS-C services are provided and ADS-C is activated, the air traffic services unit must be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.

3.6.2.3 *Change requests*. Requests for changes to the current flight plan must include the information as indicated for the proposed change below:

- (a) *Change of cruising level*: aircraft identification; requested new cruising level and cruising Mach number or true airspeed at this level; revised time estimates (when applicable) at subsequent reporting point or flight information region boundaries.
- (b) *Change of Mach number or true airspeed*: aircraft identification; requested Mach number or true airspeed.
- (c) *Change of route*:
  - 1) *Destination unchanged*: aircraft identification; flight rules; description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence; revised time estimates; any other pertinent information.
  - 2) *Destination changed*: aircraft identification; flight rules; description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which requested change of route is to commence;

ELEVENTH SCHEDULE — *continued*

revised time estimates; alternate aerodrome(s); any other pertinent information.

3.6.2.4 *Weather deterioration below the VMC.* When it becomes evident that flight in VMC in accordance with its current flight plan will not be practicable, a VFR flight operated as a controlled flight shall:

- a) request an amended clearance enabling the aircraft to continue in VMC to destination or to an alternative aerodrome, or to leave the airspace within which an ATC clearance is required; or
- b) if no clearance in accordance with a) can be obtained, continue to operate in VMC and notify the appropriate ATC unit of the action being taken either to leave the airspace concerned or to land at the nearest suitable aerodrome; or
- c) if operated within a control zone, request authorization to operate as a special VFR flight; or
- d) request clearance to operate in accordance with the instrument flight rules.

## 3.6.3 Position reports

3.6.3.1 Unless exempted by the appropriate ATS authority or by the appropriate air traffic services unit under conditions specified by that authority, a controlled flight shall report to the appropriate air traffic services unit, as soon as possible, the time and level of passing each designated compulsory reporting point, together with any other required information. Position reports shall similarly be made in relation to additional points when requested by the appropriate air traffic services unit. In the absence of designated reporting points, position reports shall be made at intervals prescribed by the appropriate ATS authority or specified by the appropriate air traffic services unit.

3.6.3.1.1 Controlled flights providing position information to the appropriate air traffic services unit via data link communications shall only provide voice position reports when requested.

## 3.6.4 Termination of control

A controlled flight shall, except when landing at a controlled aerodrome, advise the appropriate ATC unit as soon as it ceases to be subject to air traffic control service.

## 3.6.5 Communications

3.6.5.1 An aircraft operated as a controlled flight shall maintain continuous air-ground voice communication watch on the appropriate communication channel

ELEVENTH SCHEDULE — *continued*

of, and establish two-way communication as necessary with, the appropriate air traffic control unit, except as may be prescribed by the appropriate ATS authority in respect of aircraft forming part of aerodrome traffic at a controlled aerodrome.

3.6.5.2 *Communication failure.* If a communication failure precludes compliance with 3.6.5.1, the aircraft shall comply with the voice communication failure procedures of Annex 10, Volume II, and with such of the following procedures as are appropriate. The aircraft shall attempt to establish communications with the appropriate air traffic control unit using all other available means. In addition, the aircraft, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by visual signals.

3.6.5.2.1 If in visual meteorological conditions, the aircraft shall:

- a) continue to fly in visual meteorological conditions; land at the nearest suitable aerodrome; and report its arrival by the most expeditious means to the appropriate air traffic services unit;
- b) if considered advisable, complete an IFR flight in accordance with 3.6.5.2.2.

3.6.5.2.2 If in instrument meteorological conditions or when the pilot of an IFR flight considers it inadvisable to complete the flight in accordance with 3.6.5.2.1 a), the aircraft shall:

- a) unless otherwise prescribed on the basis of regional air navigation agreement, in airspace where radar is not used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan;
- b) in airspace where radar is used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 7 minutes following:
  - 1) the time the last assigned level or minimum flight altitude is reached; or
  - 2) the time the transponder is set to Code 7600; or
  - 3) the aircraft's failure to report its position over a compulsory reporting point;

whichever is later, and thereafter adjust level and speed in accordance with the filed flight plan;

ELEVENTH SCHEDULE — *continued*

- c) when being radar vectored or having been directed by ATC to proceed offset using area navigation (RNAV) without a specified limit, rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude;
- d) proceed according to the current flight plan route to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure compliance with e) below, hold over this aid or fix until commencement of descent;
- e) commence descent from the navigation aid or fix specified in d) at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to, the estimated time of arrival resulting from the current flight plan;
- f) complete a normal instrument approach procedure as specified for the designated navigation aid or fix; and
- g) land, if possible, within 30 minutes after the estimated time of arrival specified in e) or the last acknowledged expected approach time, whichever is later.

**3.7 Unlawful interference**

3.7.1 An aircraft which is being subjected to unlawful interference shall endeavour to notify the appropriate ATS unit of this fact, any significant circumstances associated therewith and any deviation from the current flight plan necessitated by the circumstances, in order to enable the ATS unit to give priority to the aircraft and to minimize conflict with other aircraft.

3.7.2 If an aircraft is subjected to unlawful interference, the pilot-in-command shall attempt to land as soon as practicable at the nearest suitable aerodrome or at a dedicated aerodrome assigned by the appropriate authority unless considerations aboard the aircraft dictate otherwise.

**3.8 Interception**

3.8.1 Interception of civil aircraft shall be governed by appropriate regulations and administrative directives issued by Contracting States in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft. Accordingly, in drafting appropriate regulations and administrative directives due regard shall be had to the provisions of Appendix 1, Section 2 and Appendix 2, Section 1.



ELEVENTH SCHEDULE — *continued*

3.8.2 The pilot-in-command of a civil aircraft, when intercepted, shall comply with the Standards in Appendix 2, Sections 2 and 3, interpreting and responding to visual signals as specified in Appendix 1, Section 2.

**3.9 VMC visibility and distance from cloud minima**

VMC visibility and distance from cloud minima are contained in Table 3-1.

Table 3-1*			
<i>(see 4.1)</i>			
Altitude band	Airspace class	Flight visibility	Distance from cloud
At and above 3 050 m (10 000 ft) AMSL	A <sup>***</sup> B C D E F G	8 km	1 500 m horizontally 300 m (1 000 ft) vertically
Below 3 050 m (10 000 ft) AMSL and above 900 m (3 000 ft) AMSL, or above 300 m (1 000 ft) above terrain, whichever is the higher	A <sup>***</sup> B C D E F G	5 km	1 500 m horizontally 300 m (1 000 ft) vertically
At and below 900 m (3 000 ft) AMSL, or 300 m (1 000 ft) above terrain, whichever is the higher	A <sup>***</sup> B C D E	5 km	1 500 m horizontally 300 m (1 000 ft) vertically
	F G	5 km <sup>**</sup>	Clear of cloud and with the surface in sight

\*When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 should be used in lieu of 10 000 ft.

\*\*When so prescribed by the appropriate ATS authority:

- a) flight visibilities reduced to not less than 1 500 m may be permitted for flights operating:
  - 1) at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
  - 2) in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels.
- b) HELICOPTERS may be permitted to operate *in less than 1 500 m* flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

ELEVENTH SCHEDULE — *continued*

\*\*\*The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.

[S 729/2010 wef 01/12/2010]

[S 570/2011 wef 04/10/2011]

[S 617/2012 wef 17/12/2012]

[S 589/2016 wef 18/11/2016]

**CHAPTER 4. VISUAL FLIGHT RULES**

4.1 Except when operating as a special VFR flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in Table 3-1.

4.2 Except when a clearance is obtained from an air traffic control unit, VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or traffic pattern:

- a) when the ceiling is less than 450 m (1 500 ft); or
- b) when the ground visibility is less than 5 km.

4.3 VFR flights between sunset and sunrise, or such other period between sunset and sunrise as may be prescribed by the appropriate ATS authority, shall be operated in accordance with the conditions prescribed by such authority.

4.4 Unless authorized by the appropriate ATS authority, VFR flights shall not be operated:

- a) above FL 200;
- b) at transonic and supersonic speeds.

4.5 Authorization for VFR flights to operate above FL 290 shall not be granted in areas where a vertical separation minimum of 300 m (1 000 ft) is applied above FL 290.

4.6 Except when necessary for take-off or landing, or except by permission from the appropriate authority, a VFR flight shall not be flown:

- a) over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300 m (1 000 ft) above the highest obstacle within a radius of 600 m from the aircraft;
- b) elsewhere than as specified in 4.6 a), at a height less than 150 m (500 ft) above the ground or water.

4.7 Except where otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority, VFR flights in level cruising flight

ELEVENTH SCHEDULE — *continued*

when operated above 900 m (3 000 ft) from the ground or water, or a higher datum as specified by the appropriate ATS authority, shall be conducted at a cruising level appropriate to the track as specified in the tables of cruising levels in Appendix 3.

4.8 VFR flights shall comply with the provisions of 3.6:

- a) when operated within Classes B, C and D airspace;
- b) when forming part of aerodrome traffic at controlled aerodromes; or
- c) when operated as special VFR flights.

4.9 A VFR flight operating within or into areas, or along routes, designated by the appropriate ATS authority in accordance with 3.3.1.2 c) or d) shall maintain continuous air-ground voice communication watch on the appropriate communication channel of, and report its position as necessary to, the air traffic services unit providing flight information service.

4.10 An aircraft operated in accordance with the visual flight rules which wishes to change to compliance with the instrument flight rules shall:

- a) if a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan; or
- b) when so required by 3.3.1.2, submit a flight plan to the appropriate air traffic services unit and obtain a clearance prior to proceeding IFR when in controlled airspace.

## CHAPTER 5. INSTRUMENT FLIGHT RULES

### 5.1 Rules applicable to all IFR flights

#### 5.1.1 Aircraft equipment

Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown.

#### 5.1.2 Minimum levels

Except when necessary for take-off or landing, or except when specifically authorized by the appropriate authority, an IFR flight shall be flown at a level which is not below the minimum flight altitude established by the State whose territory is overflown, or, where no such minimum flight altitude has been established:

- a) over high terrain or in mountainous areas, at a level which is at least 600 m (2 000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft;

ELEVENTH SCHEDULE — *continued*

- b) elsewhere than as specified in a), at a level which is at least 300 m (1 000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.

## 5.1.3 Change from IFR flight to VFR flight

5.1.3.1 An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall, if a flight plan was submitted, notify the appropriate air traffic services unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.

5.1.3.2 When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

**5.2 Rules applicable to IFR flights within controlled airspace**

5.2.1 IFR flights shall comply with the provisions of 3.6 when operated in controlled airspace.

5.2.2 An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level, or, if authorized to employ cruise climb techniques, between two levels or above a level, selected from:

- a) the tables of cruising levels in Appendix 3; or
- b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 for flight above FL 410;

except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority in Aeronautical Information Publications.

**5.3 Rules applicable to IFR flights outside controlled airspace**

## 5.3.1 Cruising levels

An IFR flight operating in level cruising flight outside of controlled airspace shall be flown at a cruising level appropriate to its track as specified in:

- a) the tables of cruising levels in Appendix 3, except when otherwise specified by the appropriate ATS authority for flight at or below 900 m (3 000 ft) above mean sea level; or
- b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 for flight above FL 410.

## 5.3.2 Communications

ELEVENTH SCHEDULE — *continued*

An IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATS authority in accordance with 3.3.1.2 c) or d) shall maintain an air-ground voice communication watch on the appropriate communication channel and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

## 5.3.3 Position reports

An IFR flight operating outside controlled airspace and required by the appropriate ATS authority to:

- submit a flight plan,
- maintain an air-ground voice communication watch on the appropriate communication channel and establish two-way communication, as necessary, with the air traffic services unit providing flight information service,

shall report position as specified in 3.6.3 for controlled flights.

**APPENDIX 1. SIGNALS****1. DISTRESS AND URGENCY SIGNALS****1.1 Distress signals**

The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested:

- a) a signal made by radiotelegraphy or by any other signalling method consisting of the group SOS (. . . — — — . . . in the Morse Code);
- b) a radiotelephony distress signal consisting of the spoken word MAYDAY;
- c) a distress message sent via data link which transmits the intent of the word MAYDAY;
- d) rockets or shells throwing red lights, fired one at a time at short intervals;
- e) a parachute flare showing a red light.

**1.2 Urgency signals**

1.2.1 The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance:

- a) the repeated switching on and off of the landing lights; or

ELEVENTH SCHEDULE — *continued*

- b) the repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

1.2.2 The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight:

- a) a signal made by radiotelegraphy or by any other signalling method consisting of the group XXX;
- b) a radiotelephony urgency signal consisting of the spoken words PAN, PAN;
- c) an urgency message sent via data link which transmits the intent of the words PAN, PAN.

## 2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

### 2.1 Signals initiated by intercepting aircraft and responses by intercepted aircraft

<i>Series</i>	<i>INTERCEPTING Aircraft Signals</i>	<i>Meaning</i>	<i>INTERCEPTED Aircraft Responds</i>	<i>Meaning</i>
1	<p>DAY or NIGHT — Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left (or to the right in the case of a helicopter) or the desired heading.</p> <p><i>Note 1. — Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1.</i></p>	<p>You have been intercepted.</p> <p>Follow me.</p>	<p>DAY or NIGHT — Rocking aircraft, flashing navigational lights at irregular intervals and following.</p> <p><i>Note — Additional action required to be taken by intercepted aircraft is prescribed in Chapter 3, 3.8.</i></p>	Understood, will comply.

ELEVENTH SCHEDULE — *continued*

	<i>Note 2. —If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of racetrack patterns and to rock the aircraft each time it passes the intercepted aircraft.</i>			
2	DAY or NIGHT — An abrupt breakaway manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT — Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT — Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT — Lowering landing gear (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

## 2.2 Signals initiated by intercepted aircraft and responses by intercepting aircraft

<i>Series</i>	<i>INTERCEPTED Aircraft Signals</i>	<i>Meaning</i>	<i>INTERCEPTING Aircraft Responds</i>	<i>Meaning</i>
4	DAY or NIGHT — Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300 m (1 000 ft) but not exceeding 600 m (2 000 ft) (in the case of a helicopter, at a height exceeding 50 m (170 ft) but not exceeding 100 m (330 ft)) above the	Aerodrome you have designated is inadequate.	DAY or NIGHT — If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing area (if fitted) and gear the Series 1 signals prescribed for intercepting aircraft.	Understood, follow me.

ELEVENTH SCHEDULE — *continued*

	aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.			
5	DAY or NIGHT — Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft. DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood, you may proceed. Understood.
6	DAY or NIGHT — Irregular flashing of all available lights.	In distress.	DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood.

**3. VISUAL SIGNALS USED TO WARN  
AN UNAUTHORIZED AIRCRAFT FLYING IN,  
OR ABOUT TO ENTER A RESTRICTED,  
PROHIBITED OR DANGER AREA**

By day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars will indicate to an unauthorized aircraft that it is flying in or about to enter a restricted, prohibited or danger area, and that the aircraft is to take such remedial action as may be necessary.

**4. SIGNALS FOR AERODROME TRAFFIC**

**4.1 Light and pyrotechnic signals**

4.1.1 Instructions

<i>Light</i>	<i>From Aerodrome Control to:</i>	
	<i>Aircraft in flight</i>	<i>Aircraft on the ground</i>



ELEVENTH SCHEDULE — continued

Directed towards aircraft concerned (see Figure A1-1)	Steady green	Cleared to land	Cleared for take-off
	Steady red	Give way to other aircraft and continue circling	Stop
	Series of green flashes	Return for landing*	Cleared to taxi
	Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
	Series of white flashes	Land at this aerodrome and proceed to apron*	Return to starting point on the aerodrome
Red Pyrotechnic	Notwithstanding any previous instructions, do not land for the time being		

\*Clearance to land and to taxi will be given in due course.

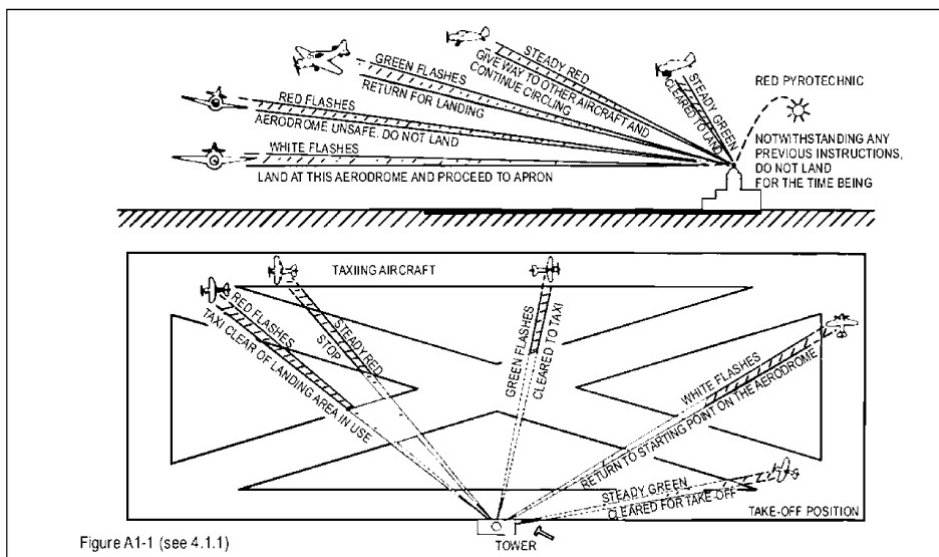


Figure A1-1 (see 4.1.1)

4.1.2 Acknowledgement by an aircraft

ELEVENTH SCHEDULE — *continued*a) *When in flight:*

## 1) during the hours of daylight:

— by rocking the aircraft's wings;

## 2) during the hours of darkness:

— by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

b) *When on the ground:*

## 1) during the hours of daylight:

— by moving the aircraft's ailerons or rudder;

## 2) during the hours of darkness:

— by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

**4.2 Visual ground signals**

## 4.2.1 Prohibition of landing

A horizontal red square panel with yellow diagonals (Figure A1-2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.



Figure A1-2

## 4.2.2 Need for special precautions while approaching or landing

A horizontal red square panel with one yellow diagonal (Figure A1-3) when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions must be observed in approaching to land or in landing.

ELEVENTH SCHEDULE — *continued*

Figure A1-3

## 4.2.3 Use of runways and taxiways

4.2.3.1 A horizontal white dumb-bell (Figure A1-4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

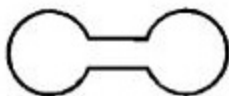


Figure A1-4

4.2.3.2 The same horizontal white dumb-bell as in 4.2.3.1 but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure A1-5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways.

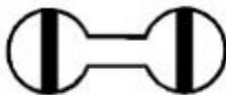


Figure A1-5

## 4.2.4 Closed runways or taxiways

Crosses of a single contrasting colour, yellow or white (Figure A1-6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

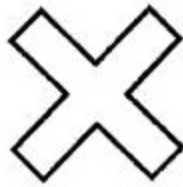
ELEVENTH SCHEDULE — *continued*

Figure A1-6

## 4.2.5 Directions for landing or take-off

4.2.5.1 A horizontal white or orange landing T (Figure A1-7) indicates the direction to be used by aircraft for landing and take-off, which shall be in a direction parallel to the shaft of the T towards the cross arm.

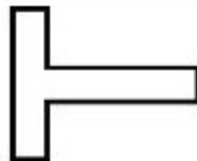


Figure A1-7

4.2.5.2 A set of two digits (Figure A1-8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.



Figure A1-8

## 4.2.6 Right-hand traffic

ELEVENTH SCHEDULE — *continued*

When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure A1-9) indicates that turns are to be made to the right before landing and after take-off.

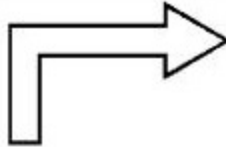


Figure A1-9

## 4.2.7 Air traffic services reporting office

The letter C displayed vertically in black against a yellow background (Figure A1-10) indicates the location of the air traffic services reporting office.



Figure A1-10

## 4.2.8 Glider flights in operation

A double white cross displayed horizontally (Figure A1-11) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

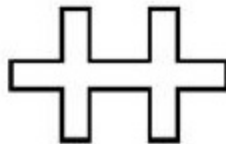


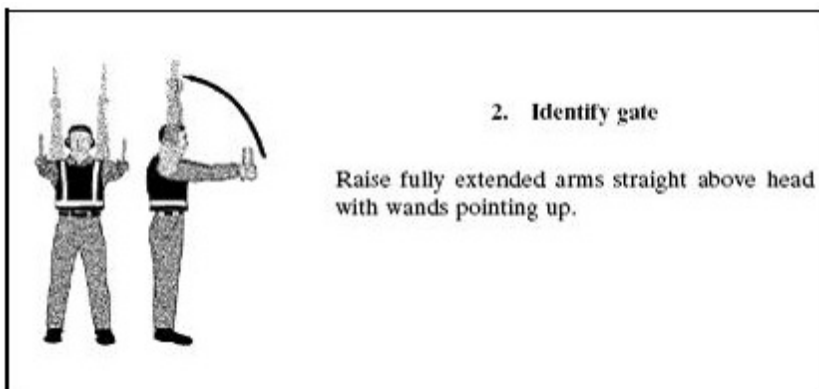
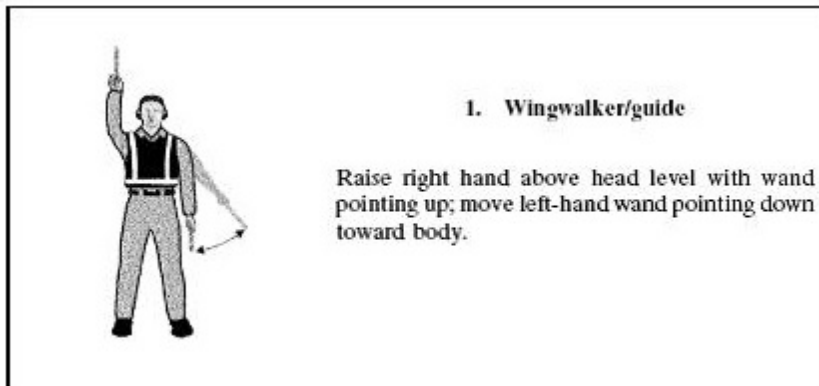
Figure A1-11

**5. MARSHALLING SIGNALS**

ELEVENTH SCHEDULE — *continued*

**5.1 From a signalman to an aircraft**

5.1.1 Prior to using the following signals, the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft, in complying with 3.4.1, might otherwise strike.



ELEVENTH SCHEDULE — *continued***3. Proceed to next signalman or as directed by tower/ground control**

Point both arms upward; move and extend arms outward to sides of body and point with wands to direction of next signalman or taxi area.


**4. Straight ahead**

Bend extended arms at elbows and move wands up and down from chest height to head.

**5 a). Turn left  
(from pilot's point of view)**


With right arm and wand extended at a 90-degree angle to body, make "come ahead" signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

ELEVENTH SCHEDULE — *continued*




**5 b). Turn right**  
(from pilot's point of view)

With left arm and wand extended at a 90-degree angle to body, make "come ahead" signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.



**6 a). Normal stop**


Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.



**6 b). Emergency stop**


Abruptly extend arms and wands to top of head, crossing wands.



ELEVENTH SCHEDULE — *continued*


**7 a). Set brakes**

Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. **Do not** move until receipt of “thumbs up” acknowledgement from flight crew.



**7 b). Release brakes**


Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. **Do not** move until receipt of “thumbs up” acknowledgement from flight crew.



**8 a). Chocks inserted**


With arms and wands fully extended above head, move wands inward in a “jabbing” motion until wands touch. **Ensure** acknowledgement is received from flight crew.

ELEVENTH SCHEDULE — *continued*




**8 b). Chocks removed**

With arms and wands fully extended above head, move wands outward in a “jabbing” motion. **Do not** remove chocks until authorized by flight crew.



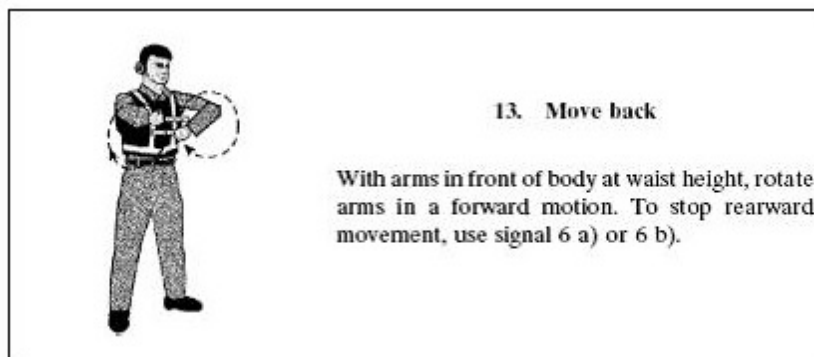
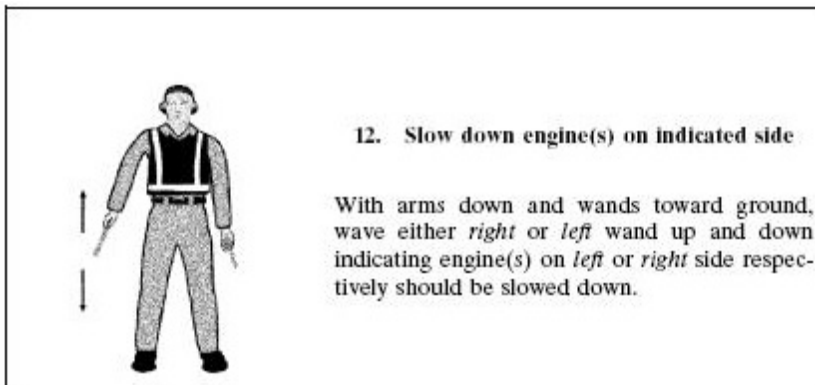
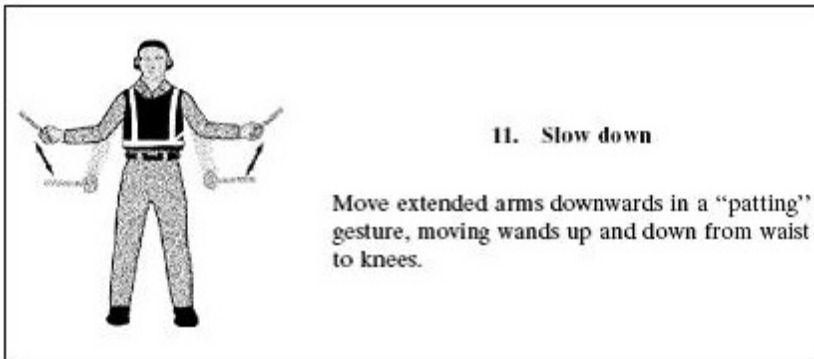
**9. Start engine(s)**

Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.




**10. Cut engines**

Extend arm with wand forward of body at shoulder level; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.


ELEVENTH SCHEDULE — *continued*

ELEVENTH SCHEDULE — *continued*




**14 a). Turns while backing  
(for tail to starboard)**

Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.



**14 b). Turns while backing  
(for tail to port)**


Point right arm with wand down and bring left arm from overhead vertical position to horizontal forward position, repeating left-arm movement.



**15. Affirmative/all clear**


Raise right arm to head level with wand pointing up or display hand with “thumbs up”; left arm remains at side by knee.

ELEVENTH SCHEDULE — *continued*



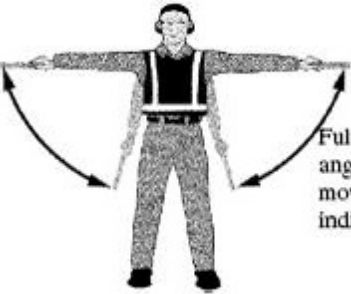
**16. Hover**

Fully extend arms and wands at a 90-degree angle to sides.



**17. Move upwards**


Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upwards. Speed of movement indicates rate of ascent.



**18. Move downwards**


Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downwards. Speed of movement indicates rate of descent.

ELEVENTH SCHEDULE — *continued*




**19 a). Move horizontally left**  
**(from pilot's point of view)**

Extend arm horizontally at a 90-degree angle to right side of body. Move other arm in same direction in a sweeping motion.



**19 b). Move horizontally right**  
**(from pilot's point of view)**

Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.



**20. Land**

Cross arms with wands downwards and in front of body.

ELEVENTH SCHEDULE — *continued***21. Hold position/stand by**


Fully extend arms and wands downwards at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.

**22. Dispatch aircraft**

Perform a standard salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until aircraft has begun to taxi.


**23. Do not touch controls  
(technical/servicing communication signal)**

Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.

ELEVENTH SCHEDULE — *continued*



**24. Connect ground power**  
(technical/servicing communication signal)

Hold arms fully extended above head; open left hand horizontally and move finger tips of right hand into and touch open palm of left hand (forming a "T"). At night, illuminated wands can also be used to form the "T" above head.



**25. Disconnect power**  
(technical/servicing communication signal)

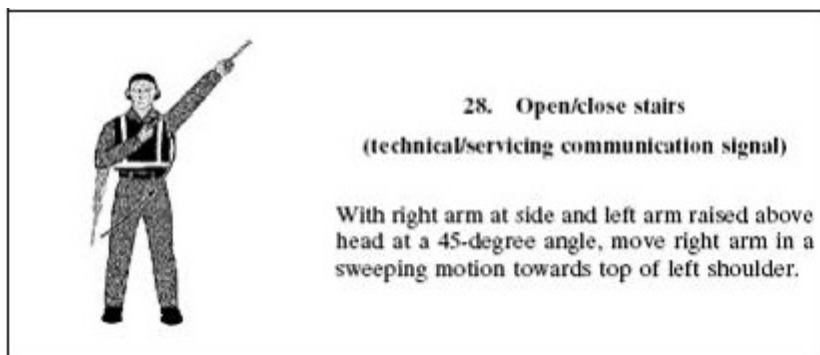
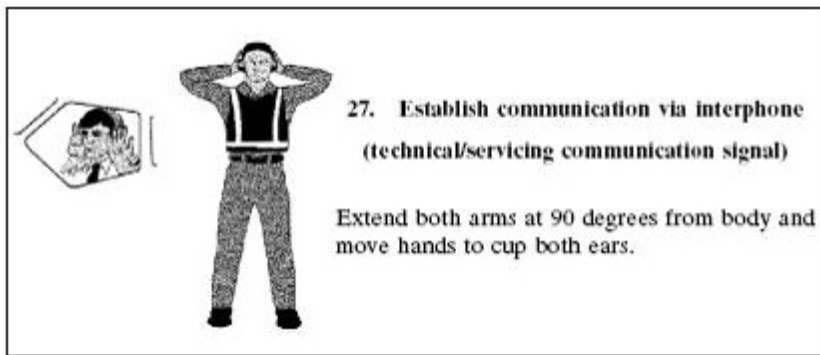
Hold arms fully extended above head with finger tips of right hand touching open horizontal palm of left hand (forming a "T"); then move right hand away from the left. **Do not** disconnect power until authorized by flight crew. At night, illuminated wands can also be used to form the "T" above head.



**26. Negative**  
(technical/servicing communication signal)

Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with "thumbs down"; left hand remains at side by knee.



ELEVENTH SCHEDULE — *continued***5.2 From the pilot of an aircraft to a signalman****5.2.1 Brakes**

- a) *Brakes engaged*: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.
- b) *Brakes released*: raise arm, with fist clenched, horizontally in front of face, then extend fingers.

**5.2.2 Chocks**

- a) *Insert chocks*: arms extended, palms outwards, move hands inwards to cross in front of face.
- b) *Remove chocks*: hands crossed in front of face, palms outwards, move arms outwards.

**5.2.3 Ready to start engine(s)**

Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

ELEVENTH SCHEDULE — *continued***5.3 Technical/servicing communication signals**

5.3.1 Manual signals shall only be used when verbal communication is not possible with respect to technical/servicing communication signals.

5.3.2 Signalmen shall ensure that an acknowledgement is received from the flight crew with respect to technical/servicing communication signals.

**6. STANDARD EMERGENCY HAND SIGNALS**

The following hand signals are established as the minimum required for emergency communication between the aircraft rescue and firefighting (ARFF) incident commander/ARFF firefighters and the cockpit and/or cabin crews of the incident aircraft. ARFF emergency hand signals should be given from the left front side of the aircraft for the flight crew.

**1. Recommend evacuation**

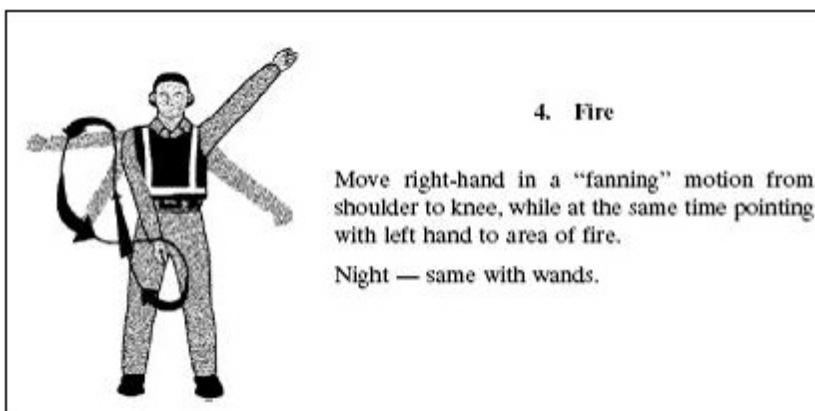
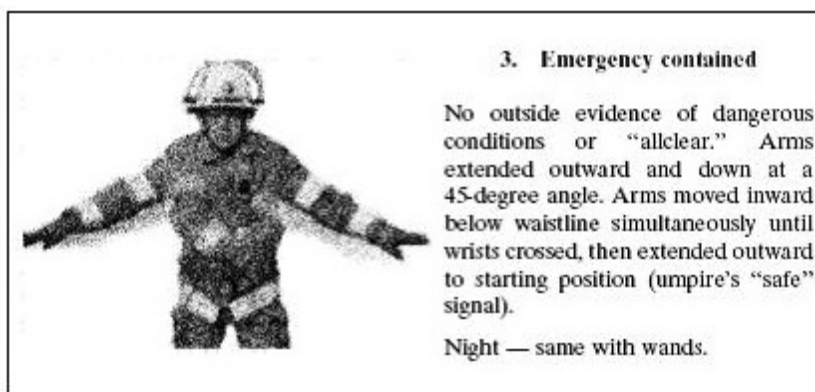
Evacuation recommended based on ARFF and incident commander's assessment of external situation. Arm extended from body and held horizontal with hand upraised at eye level. Execute beckoning arm motion angled backward. Non-beckoning arm held against body.

Night — same with wands.

**2. Recommended stop**

Recommend evacuation in progress be halted. Stop aircraft movement or other activity in progress. Arms in front of head, crossed at wrists.

Night — same with wands.

ELEVENTH SCHEDULE — *continued***APPENDIX 2. INTERCEPTION OF CIVIL AIRCRAFT****1. Principles to be observed by States**

1.1 To achieve the uniformity in regulations which is necessary for the safety of navigation of civil aircraft due regard shall be had by Contracting States to the following principles when developing regulations and administrative directives:

- a) interception of civil aircraft will be undertaken only as a last resort;
- b) if undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome;
- c) practice interception of civil aircraft will not be undertaken;

ELEVENTH SCHEDULE — *continued*

- d) navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established; and
- e) in the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

1.2 Contracting States shall publish a standard method that has been established for the manoeuvring of aircraft intercepting a civil aircraft. Such method shall be designed to avoid any hazard for the intercepted aircraft.

1.3 Contracting States shall ensure that provision is made for the use of secondary surveillance radar or ADS-B, where available, to identify civil aircraft in areas where they may be subject to interception.

## 2. Action by intercepted aircraft

2.1 An aircraft which is intercepted by another aircraft shall immediately:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Appendix 1;
- b) notify, if possible, the appropriate air traffic services unit;
- c) attempt to establish radiocommunication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz;
- d) if equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit;
- e) if equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate air traffic services unit.

2.2 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

2.3 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request

ELEVENTH SCHEDULE — *continued*

immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

**3. Radiocommunication during interception**

If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table A2-1 and transmitting each phrase twice:

Table A2-1

<i>Phrases for use by INTERCEPTING aircraft</i>			<i>Phrases for use by INTERCEPTED aircraft</i>		
<i>Phrase</i>	<i>Pronunciation<sup>1</sup></i>	<i>Meaning</i>	<i>Phrase</i>	<i>Pronunciation<sup>1</sup></i>	<i>Meaning</i>
CALL SIGN	<u>KOL</u> SA-IN	What is your call sign?	CALL SIGN (call sign) <sup>2</sup>	<u>KOL</u> SA-IN (call sign)	My call sign is (call sign)
FOLLOW	<u>FOL</u> -LO	Follow me	WILCO Will comply	<u>VILL</u> -KO	Understood
DESCEND	DEE- <u>SEND</u>	Descend for landing	CAN NOT	<u>KANN</u> NOTT	Unable to comply
YOU LAND	<u>YOU</u> <u>LAAND</u>	Land at this aerodrome	REPEAT	REE- <u>PEET</u>	Repeat your instruction
PROCEED	PRO- <u>SEED</u>	You may proceed	AM LOST	<u>AM</u> <u>LOSST</u>	Position unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK <sup>3</sup>	<u>HI</u> - <u>JACK</u>	I have been hijacked
			LAND (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE- <u>SEND</u>	I require descent

1. In the second column, syllables to be emphasized are underlined.
2. The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.
3. Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK".

ELEVENTH SCHEDULE — *continued***APPENDIX 3. TABLES OF CRUISING LEVELS**

The cruising levels to be observed when so required by this Part are as follows:

**RVSM — FEET**

- a) in areas where feet are used for altitude and where, in accordance with regional air navigation agreements, a vertical separation minimum of 1 000 ft is applied between FL 290 and FL 410 inclusive:\*

TRACK**											
From 000 degrees to 179 degrees***						From 180 degrees to 359 degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres
010	1 000	300	—	—	—	020	2 000	600	—	—	—
030	3 000	900	035	3 500	1 050	040	4 000	1 200	045	4 500	1 350
050	5 000	1 500	055	5 500	1 700	060	6 000	1 850	065	6 500	2 000
070	000	2 150	075	7 500	2 300	080	8 000	2 450	085	8 500	2 600
090	9 000	2 750	095	9 500	2 900	100	10 000	3 050	105	10 500	3 200
110	11 000	3 350	115	11 500	3 500	120	12 000	3 650	125	12 500	3 800
130	13 000	3 950	135	13 500	4 100	140	14 000	4 250	145	14 500	4 400
150	15 000	4 550	155	15 500	4 700	160	16 000	4 900	165	16 500	5 050
170	17 000	5 200	175	17 500	5 350	180	18 000	5 500	185	18 500	5 650
190	19 000	5 800	195	19 500	5 950	200	20 000	6 100	205	20 500	6 250
210	21 000	6 400	215	21 500	6 550	220	22 000	6 700	225	22 500	6 850
230	23 000	7 000	235	23 500	7 150	240	24 000	7 300	245	24 500	7 450
250	25 000	7 600	255	25 500	7 750	260	26 000	7 900	265	26 500	8 100
270	27 000	8 250	275	27 500	8 400	280	28 000	8 550	285	28 500	8 700
290	29 000	8 850				300	30 000	9 150			
310	31 000	9 450				320	32 000	9 750			
330	33 000	10 050				340	34 000	10 350			
350	35 000	10 650				360	36 000	10 950			
370	37 000	11 300				380	38 000	11 600			
390	39 000	11 900				400	40 000	12 200			
410	41 000	12 500				430	43 000	13 100			
450	45 000	13 700				470	47 000	14 350			
490	49 000	14 950				510	51 000	15 550			
etc.	etc.	etc.				etc.	etc.	etc.			

\*Except when, on the basis of regional air navigation agreements, a modified table of cruising levels based on a nominal vertical separation minimum of 1 000 ft (300 m) is prescribed for use, under specified conditions, by aircraft operating above FL 410 within designated portions of the airspace.

\*\*Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

ELEVENTH SCHEDULE — *continued*

\*\*\*Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

**RVSM — METRES**

- b) in areas where metres are used for altitude and where, in accordance with regional air navigation agreements, a vertical separation minimum of 300 m is applied between 8 900 m and 12 500 m inclusive:\*

TRACK**											
From 000 degrees to 179 degrees***						From 180 degrees to 359 degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
Standard Metric	Metres	Feet	Standard Metric	Metres	Feet	Standard Metric	Metres	Feet	Standard Metric	Metres	Feet
0030	300	1 000	—	—	—	0060	600	2 000	—	—	—
0090	900	3 000	0105	1 050	3 500	0120	1 200	3 900	0135	1 350	4 400
0150	1 500	4 900	0165	1 650	5 400	0180	1 800	5 900	0195	1 950	6 400
0210	2 100	6 900	0225	2 250	7 400	0240	2 400	7 900	0255	2 550	8 400
0270	2 700	8 900	0285	2 850	9 400	0300	3 000	9 800	0315	3 150	10 300
0330	3 300	10 800	0345	3 450	11 300	0360	3 600	11 800	0375	3 750	12 300
0390	3 900	12 800	0405	4 050	13 300	0420	4 200	13 800	0435	4 350	14 300
0450	4 500	14 800	0465	4 650	15 300	0480	4 800	15 700	0495	4 950	16 200
0510	5 100	16 700	0525	5 250	17 200	0540	5 400	17 700	0555	5 550	18 200
0570	5 700	18 700	0585	5 850	19 200	0600	6 000	19 700	0615	6 150	20 200
0630	6 300	20 700	0645	6 450	21 200	0660	6 600	21 700	0675	6 750	22 100
0690	6 900	22 600	0705	7 050	23 100	0720	7 200	23 600	0735	7 350	24 100
0750	7 500	24 600	0765	7 650	25 100	0780	7 800	25 600	0795	7 950	26 100
0810	8 100	26 600	0825	8 250	27 100	0840	8 400	27 600	0855	8 550	28 100
0890	8 900	29 100				0920	9 200	30 100			
0950	9 500	31 100				0980	9 800	32 100			

ELEVENTH SCHEDULE — *continued*

TRACK**											
From 000 degrees to 179 degrees***						From 180 degrees to 359 degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
Standard			Standard			Standard			Standard		
Metric	Metres	Feet	Metric	Metres	Feet	Metric	Metres	Feet	Metric	Metres	Feet
1010	10 100	33 100				1040	10 400	34 100			
1070	10 700	35 100				1100	11 000	36 100			
1130	11 300	37 100				1160	11 600	38 100			
1190	11 900	39 100				1220	12 200	40 100			
1250	12 500	41 100				1310	13 100	43 000			
1370	13 700	44 900				1430	14 300	46 900			
1490	14 900	48 900				1550	15 500	50 900			
etc.	etc.	etc.				etc.	etc.	etc.			

\*Except when, on the basis of regional air navigation agreements, a modified table of cruising levels based on a nominal vertical separation minimum of 1 000 ft (300 m) is prescribed for use, under specified conditions, by aircraft operating above FL 410 within designated portions of the airspace.

\*\*Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

\*\*\*Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

**Non-RVSM — FEET**

c) in other areas where feet are the primary unit of measurement for altitude:



ELEVENTH SCHEDULE — *continued*

TRACK*											
From 000 degrees to 179 degrees**						From 180 degrees to 359 degrees**					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres
010	1 000	300	—	—	—	020	2 000	600	—	—	—
030	3 000	900	035	3 500	1 050	040	4 000	1 200	045	4 500	1 350
050	5 000	1 500	055	5 500	1 700	060	6 000	1 850	065	6 500	2 000
070	7 000	2 150	075	7 500	2 300	080	8 000	2 450	085	8 500	2 600
090	9 000	2 750	095	9 500	2 900	100	10 000	3 050	105	10 500	3 200
110	11 000	3 350	115	11 500	3 500	120	12 000	3 650	125	12 500	3 800
130	13 000	3 950	135	13 500	4 100	140	14 000	4 250	145	14 500	4 400
150	15 000	4 550	155	15 500	4 700	160	16 000	4 900	165	16 500	5 050
170	17 000	5 200	175	17 500	5 350	180	18 000	5 500	185	18 500	5 650
190	19 000	5 800	195	19 500	5 950	200	20 000	6 100	205	20 500	6 250
210	21 000	6 400	215	21 500	6 550	220	22 000	6 700	225	22 500	6 850
230	23 000	7 000	235	23 500	7 150	240	24 000	7 300	245	24 500	7 450
250	25 000	7 600	255	25 500	7 750	260	26 000	7 900	265	26 500	8 100
270	27 000	8 250	275	27 500	8 400	280	28 000	8 550	285	28 500	8 700
290	29 000	8 850	300	30 000	9 150	310	31 000	9 450	320	32 000	9 750
330	33 000	10 050	340	34 000	10 350	350	35 000	10 650	360	36 000	10 950
370	37 000	11 300	380	38 000	11 600	390	39 000	11 900	400	40 000	12 200
410	41 000	12 500	420	42 000	12 800	430	43 000	13 100	440	44 000	13 400
450	45 000	13 700	460	46 000	14 000	470	47 000	14 350	480	48 000	14 650
490	49 000	14 950	500	50 000	15 250	510	51 000	15 550	520	52 000	15 850
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

\*Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

\*\*Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

**Non-RVSM — METRES**

d) in other areas where metres are the primary unit of measurement for altitude:

ELEVENTH SCHEDULE — *continued*

TRACK*											
From 000 degrees to 179 degrees**						From 180 degrees to 359 degrees**					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
Standard Metric	Metres	Feet	Standard Metric	Metres	Feet	Standard Metric	Metres	Feet	Standard Metric	Metres	Feet
0030	300	1 000	—	—	—	0060	600	2 000	—	—	—
0090	900	3 000	0105	1 050	3 500	0120	1 200	3 900	0135	1 350	4 400
0150	1 500	4 900	0165	1 650	5 400	0180	1 800	5 900	0195	1 950	6 400
0210	2 100	6 900	0225	2 250	7 400	0240	2 400	7 900	0255	2 550	8 400
0270	2 700	8 900	0285	2 850	9 400	0300	3 000	9 800	0315	3 150	10 300
0330	3 300	10 800	0345	3 450	11 300	0360	3 600	11 800	0375	3 750	12 300
0390	3 900	12 800	0405	4 050	13 300	0420	4 200	13 800	0435	4 350	14 300
0450	4 500	14 800	0465	4 650	15 300	0480	4 800	15 700	0495	4 950	16 200
0510	5 100	16 700	0525	5 250	17 200	0540	5 400	17 700	0555	5 550	18 200
0570	5 700	18 700	0585	5 850	19 200	0600	6 000	19 700	0615	6 150	20 200
0630	6 300	20 700	0645	6 450	21 200	0660	6 600	21 700	0675	6 750	22 100
0690	6 900	22 600	0705	7 050	23 100	0720	7 200	23 600	0735	7 350	24 100
0750	7 500	24 600	0765	7 650	25 100	0780	7 800	25 600	0795	7 950	26 100
0810	8 100	26 600	0825	8 250	27 100	0840	8 400	27 600	0855	8 550	28 100
0890	8 900	29 100	0920	9 200	30 100	0950	9 500	31 100	0980	9 800	32 100
1010	10 100	33 100	1040	10 400	34 100	1070	10 700	35 100	1100	11 000	36 100
1130	11 300	37 100	1160	11 600	38 100	1190	11 900	39 100	1220	12 200	40 100
1250	12 500	41 100	1280	12 800	42 100	1310	13 100	43 000	1370	13 700	44 000
1370	13 700	44 900	1400	14 000	46 100	1430	14 300	46 900	1460	14 600	47 900
1490	14 900	48 900	1520	15 200	49 900	1550	15 500	50 900	1580	15 800	51 900
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

\*Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

\*\*Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

[S 729/2010 wef 01/12/2010]

## APPENDIX 4. UNMANNED FREE BALLOONS

### 1. Classification of unmanned free balloons

Unmanned free balloons shall be classified as:

ELEVENTH SCHEDULE — *continued*

- a) *light*: an unmanned free balloon which carries a payload of one or more packages with a combined mass of less than 4 kg, unless qualifying as a heavy balloon in accordance with c) 2), 3) or 4) below; or
- b) *medium*: an unmanned free balloon which carries a payload of two or more packages with a combined mass of 4 kg or more, but less than 6 kg, unless qualifying as a heavy balloon in accordance with c) 2), 3) or 4) below; or
- c) *heavy*: an unmanned free balloon which carries a payload which:
  - 1) has a combined mass of 6 kg or more; or
  - 2) includes a package of 3 kg or more; or
  - 3) includes a package of 2 kg or more with an area density of more than 13 g per square centimetre; or
  - 4) uses a rope or other device for suspension of the payload that requires an impact force of 230 N or more to separate the suspended payload from the balloon.

**2. General operating rules**

2.1 An unmanned free balloon shall not be operated without appropriate authorization from the State from which the launch is made.

2.2 An unmanned free balloon, other than a light balloon used exclusively for meteorological purposes and operated in the manner prescribed by the appropriate authority, shall not be operated across the territory of another State without appropriate authorization from the other State concerned.

2.3 The authorization referred to in 2.2 shall be obtained prior to the launching of the balloon if there is reasonable expectation, when planning the operation, that the balloon may drift into airspace over the territory of another State. Such authorization may be obtained for a series of balloon flights or for a particular type of recurring flight, e.g. atmospheric research balloon flights.

2.4 An unmanned free balloon shall be operated in accordance with conditions specified by the State of Registry and the State(s) expected to be overflown.

2.5 An unmanned free balloon shall not be operated in such a manner that impact of the balloon, or any part thereof, including its payload, with the surface of the earth, creates a hazard to persons or property not associated with the operation.

2.6 A heavy unmanned free balloon shall not be operated over the high seas without prior coordination with the appropriate ATS authority.

ELEVENTH SCHEDULE — continued

CHARACTERISTICS		PAYLOAD MASS (kilogrammes)					
		1	2	3	4	5	6 or more
ROPE or OTHER SUSPENSION  230 Newtons or MORE		<b>HEAVY</b>					
INDIVIDUAL PAYLOAD PACKAGE  <div style="border: 1px dashed black; padding: 2px; width: fit-content;">                         AREA DENSITY CALCULATION  <math display="block">\frac{\text{MASS (g)}}{\text{Area of smallest surface (cm}^2\text{)}}</math> </div>	AREA DENSITY more than 13 g/cm <sup>2</sup>	<b>LIGHT</b>					
	AREA DENSITY less than 13 g/cm <sup>2</sup>						
COMBINED MASS (if Suspension OR Area density OR Mass of individual package are not factors)		<b>LIGHT</b>					

Figure A4-1. Classification of unmanned free balloons

**3. Operating limitations and equipment requirements**

3.1 A heavy unmanned free balloon shall not be operated without authorization from the appropriate ATS authority at or through any level below 18 000 m (60 000 ft) pressure-altitude at which:

- a) there are clouds or obscuring phenomena of more than four oktas coverage; or
- b) the horizontal visibility is less than 8 km.

ELEVENTH SCHEDULE — *continued*

3.2 A heavy or medium unmanned free balloon shall not be released in a manner that will cause it to fly lower than 300 m (1 000 ft) over the congested areas of cities, towns or settlements or an open-air assembly of persons not associated with the operation.

3.3 A heavy unmanned free balloon shall not be operated unless:

- a) it is equipped with at least two payload flight termination devices or systems, whether automatic or operated by telecommand, that operate independently of each other;
- b) for polyethylene zero-pressure balloons, at least two methods, systems, devices, or combinations thereof, that function independently of each other are employed for terminating the flight of the balloon envelope;
- c) the balloon envelope is equipped with either a radar reflective device(s) or radar reflective material that will present an echo to surface radar operating in the 200 MHz to 2 700 MHz frequency range, and/or the balloon is equipped with such other devices as will permit continuous tracking by the operator beyond the range of ground-based radar.

3.4 A heavy unmanned free balloon shall not be operated under the following conditions:

- a) in an area where ground-based SSR equipment is in use, unless it is equipped with a secondary surveillance radar transponder, with pressure-altitude reporting capability, which is continuously operating on an assigned code, or which can be turned on when necessary by the tracking station; or
- b) in an area where ground-based ADS-B equipment is in use, unless it is equipped with an ADS-B transmitter, with pressure-altitude reporting capability, which is continuously operating or which can be turned on when necessary by the tracking station.

3.5 An unmanned free balloon that is equipped with a trailing antenna that requires a force of more than 230 N to break it at any point shall not be operated unless the antenna has coloured pennants or streamers that are attached at not more than 15 m intervals.

3.6 A heavy unmanned free balloon shall not be operated below 18 000 m (60 000 ft) pressure-altitude between sunset and sunrise or such other period between sunset and sunrise (corrected to the altitude of operation) as may be prescribed by the appropriate ATS authority, unless the balloon and its attachments and payload, whether or not they become separated during the operation, are lighted.

ELEVENTH SCHEDULE — *continued*

3.7 A heavy unmanned free balloon that is equipped with a suspension device (other than a highly conspicuously coloured open parachute) more than 15 m long shall not be operated between sunrise and sunset below 18 000 m (60 000 ft) pressure-altitude unless the suspension device is coloured in alternate bands of high conspicuity colours or has coloured pennants attached.

**4. Termination**

The operator of a heavy unmanned free balloon shall activate the appropriate termination devices required by 3.3 a) and b) above:

- a) when it becomes known that weather conditions are less than those prescribed for the operation;
- b) if a malfunction or any other reason makes further operation hazardous to air traffic or to persons or property on the surface; or
- c) prior to unauthorized entry into the airspace over another State's territory.

**5. Flight notification**

## 5.1 Pre-flight notification

5.1.1 Early notification of the intended flight of an unmanned free balloon in the medium or heavy category shall be made to the appropriate air traffic services unit not less than seven days before the date of the intended flight.

5.1.2 Notification of the intended flight shall include such of the following information as may be required by the appropriate air traffic services unit:

- a) balloon flight identification or project code name;
- b) balloon classification and description;
- c) SSR code, aircraft address or NDB frequency as applicable;
- d) operator's name and telephone number;
- e) launch site;
- f) estimated time of launch (or time of commencement and completion of multiple launches);
- g) number of balloons to be launched and the scheduled interval between launches (if multiple launches);
- h) expected direction of ascent;
- i) cruising level(s) (pressure-altitude);

ELEVENTH SCHEDULE — *continued*

- j) the estimated elapsed time to pass 18 000 m (60 000 ft) pressure-altitude or to reach cruising level if at or below 18 000 m (60 000 ft), together with the estimated location;
- k) the estimated date and time of termination of the flight and the planned location of the impact/recovery area. In the case of balloons carrying out flights of long duration, as a result of which the date and time of termination of the flight and the location of impact cannot be forecast with accuracy, the term "long duration" shall be used.

5.1.3 Any changes in the pre-launch information notified in accordance with 5.1.2 above shall be forwarded to the air traffic services unit concerned not less than 6 hours before the estimated time of launch, or in the case of solar or cosmic disturbance investigations involving a critical time element, not less than 30 minutes before the estimated time of the commencement of the operation.

## 5.2 Notification of launch

Immediately after a medium or heavy unmanned free balloon is launched the operator shall notify the appropriate air traffic services unit of the following:

- a) balloon flight identification;
- b) launch site;
- c) actual time of launch;
- d) estimated time at which 18 000 m (60 000 ft) pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 18 000 m (60 000 ft), and the estimated location; and
- e) any changes to the information previously notified in accordance with 5.1.2 g) and h).

## 5.3 Notification of cancellation

The operator shall notify the appropriate air traffic services unit immediately it is known that the intended flight of a medium or heavy unmanned free balloon, previously notified in accordance with 5.1, has been cancelled.

**6. Position recording and reports**

6.1 The operator of a heavy unmanned free balloon operating at or below 18 000 m (60 000 ft) pressure-altitude shall monitor the flight path of the balloon and forward reports of the balloon's position as requested by air traffic services. Unless air traffic services require reports of the balloon's position at more frequent intervals, the operator shall record the position every 2 hours.

ELEVENTH SCHEDULE — *continued*

6.2 The operator of a heavy unmanned free balloon operating above 18 000 m (60 000 ft) pressure-altitude shall monitor the flight progress of the balloon and forward reports of the balloon's position as requested by air traffic services. Unless air traffic services require reports of the balloon's position at more frequent intervals, the operator shall record the position every 24 hours.

6.3 If a position cannot be recorded in accordance with 6.1 and 6.2, the operator shall immediately notify the appropriate air traffic services unit. This notification shall include the last recorded position. The appropriate air traffic services unit shall be notified immediately when tracking of the balloon is re-established.

6.4 One hour before the beginning of planned descent of a heavy unmanned free balloon, the operator shall forward to the appropriate ATS unit the following information regarding the balloon:

- a) the current geographical position;
- b) the current level (pressure-altitude);
- c) the forecast time of penetration of 18 000 m (60 000 ft) pressure-altitude, if applicable;
- d) the forecast time and location of ground impact.

6.5 The operator of a heavy or medium unmanned free balloon shall notify the appropriate air traffic services unit when the operation is ended.

[S 617/2012 wef 17/12/2012]

## PART II

## NATIONAL STANDARDS

**Definitions for this Part**

1.1 The terms used in this Part shall have the same meanings as the same terms defined in Chapter 1 of Part I.

- 1.2 (a) For the purpose of this Part, the horizontal plane of a light shown by an aircraft means the plane which would be the horizontal plane passing through the source of that light, if the aircraft were in level flight.
- (b) Where by reason of the physical construction of an aircraft it is necessary to fit more than one lamp in order to show a light required by this Part, the lamps shall be so fitted and constructed that, so far as is reasonably practicable, not more than one such lamp is visible from any one point outside the aircraft.



ELEVENTH SCHEDULE — *continued*

- (c) Where in this Part a light is required to show through specified angles in the horizontal plane, the lamps giving such light shall be so constructed and fitted that the light is visible from any point in any vertical plane within those angles throughout angles of 90° above and below the horizontal plane, but, so far as is reasonably practicable, through no greater angle, either in the horizontal plane or the vertical plane.
- (d) Where in this Part a light is required to show in all directions the lamps giving such light shall be so constructed and fitted that, so far as is reasonably practicable, the light is visible from any point in the horizontal plane and on any vertical plane passing through the source of that light.

**Meaning of Standard Atmosphere**

2. For the purpose of the definition of “pressure-altitude” in Chapter 1 of Part I, “Standard Atmosphere” means an atmosphere defined as follows:

- (a) the air is a perfect dry gas;
- (b) the physical constants are:
- Sea level mean molar mass:  $M_0 = 28.964420 \times 10^{-3} \text{ kg mol}^{-1}$
  - Sea level atmospheric pressure:  $P_0 = 1013.250 \text{ hPa}$
  - Sea level temperature:  $t_0 = 15^\circ\text{C}$   
 $T_0 = 288.15 \text{ K}$
  - Sea level atmospheric density:  $\rho_0 = 1.2250 \text{ kg m}^{-3}$
  - Temperature of the ice point:  $T_i = 273.15 \text{ K}$
  - Universal gas constant:  $R^* = 8.31432 \text{ JK}^{-1} \text{ mol}^{-1}$
- (c) the temperature gradients are:

[S 729/2010 wef 01/12/2010]

<i>Geopotential altitude (km)</i>		<i>Temperature gradient (Kelvin per standard geopotential kilometre)</i>
<i>From</i>	<i>To</i>	
-5.0	11.0	-6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8

ELEVENTH SCHEDULE — *continued*

47.0	51.0	0.0
51.0	71.0	-2.8
71.0	80.0	-2.0

**Reporting Hazardous Conditions**

3. The pilot-in-command of an aircraft shall, on meeting with hazardous conditions in the course of a flight, or as soon as possible thereafter, send to the appropriate air traffic control unit by the quickest means available information containing such particulars of the hazardous conditions as may be pertinent to the safety of other aircraft.

**Practice Instrument Approaches**

4. Within Singapore, an aircraft shall not carry out instrument approach practice when flying in Visual Meteorological Conditions unless —

- (a) the appropriate air traffic control unit has previously been informed that the flight is to be made for the purpose of instrument approach practice; and
- (b) if the flight is not being carried out in simulated instrument flight conditions, an observer approved by the Chief Executive is carried in such a position in the aircraft that he has an adequate field of vision and can readily communicate with the pilot flying the aircraft.

**Failure of Navigation Lights**

5. In Singapore, in the event of the failure of any light which is required by this Part to be displayed in flight, if the light cannot be immediately repaired or replaced the aircraft shall land as soon as in the opinion of the pilot-in-command of the aircraft it can safely do so, unless authorised by the appropriate air traffic control unit to continue its flight.

**Flying Machines**

6.1 A flying machine when flying at night shall display lights as follows:

- (a) in the case of a flying machine registered in Singapore having a maximum total weight authorised of more than 5,700 kg, it shall display the system of lights specified in 6.2(b);
- (b) in the case of a flying machine registered in Singapore having a maximum total weight authorised of 5,700 kg or less, any one of the following systems of lights —
  - (i) that specified in 6.2(a);

ELEVENTH SCHEDULE — *continued*

- (ii) that specified in 6.2(b); or
  - (iii) that specified in 6.2(d) excluding 6.2(d)(ii); and
- (c) in the case of any other flying machine one of the systems of lights specified in 6.2.

6.2 The systems of lights referred to in 6.1 are as follows:

- (a)
  - (i) a green light of at least 5 candela showing to the starboard side through an angle of  $110^\circ$  from dead ahead in the horizontal plane;
  - (ii) a red light of at least 5 candela showing to the port side through an angle of  $110^\circ$  from dead ahead in the horizontal plane; and
  - (iii) a white light of at least 3 candela showing through angles of  $70^\circ$  from dead astern to each side in the horizontal plane, all being steady lights;
- (b)
  - (i) the lights specified in (a); and
  - (ii) an anti-collision light;
- (c) the lights specified in (a), but all being flashing lights flashing together; and
- (d) the lights specified in (a), but all being flashing lights flashing together in alternation with one or both of the following:
  - (i) A flashing white light of at least 20 candela showing in all directions;
  - (ii) a flashing red light of at least 20 candela showing through angles of  $70^\circ$  from dead astern to each side in the horizontal plane.

6.3 If the lamp showing either the red or the green light specified in 6.2(a) is fitted more than two metres from the wing tip, a lamp may, notwithstanding 3.2.3.1 of Part I, be fitted at the wing tip to indicate its position, showing a steady light of the same colour through the same angle.

### **Gliders**

7. A glider while flying at night shall display either a steady red light of at least 5 candela showing in all directions, or lights in accordance with 6.2 and 6.3 of this Part.

### **Free Balloons**

8. A free balloon while flying at night shall display a steady red light, of at least 5 candela, showing in all directions, suspended not less than 5 metres and not more

ELEVENTH SCHEDULE — *continued*

than 10 metres below the basket, or if there is no basket, below the lowest part of the balloon.

**Captive Balloons and Kites**

9.1 A captive balloon or kite while flying at night at a height exceeding 60 metres above the surface shall display lights as follows:

- (a) a group of two steady lights consisting of a white light placed 4 metres above a red light, both being of at least 5 candela and showing in all directions, the white light being placed not less than 5 metres or more than 10 metres below the basket, or, if there is no basket, below the lowest part of the balloon or kite;
- (b) on the mooring cable, at intervals of not more than 300 metres measured from the group of lights referred to in (a), groups of lights of the colour and power and in the relative position specified in that sub-paragraph, and, if the lowest group of lights is obscured by cloud, an additional group below the cloud base; and
- (c) on the surface, a group of 3 flashing lights arranged in a horizontal plane at the apexes of a triangle, approximately equilateral, each side of which measures at least 25 metres; one side of the triangle shall be approximately at right angles to the horizontal projection of the cable and shall be delimited by two red lights; the third light shall be a green light so placed that the triangle encloses the object on the surface to which the balloon or kite is moored.

9.2 A captive balloon while flying by day at a height exceeding 60 metres above the surface shall have attached to its mooring cable at intervals of not more than 200 metres measured from the basket, or, if there is no basket, from the lowest part of the balloon, tubular streamers not less than 40 cm in diameter and two metres in length, and marked with alternate bands of red and white 50 cm wide.

9.3 A kite flown in the circumstances referred to in 9.2 shall have attached to its mooring cable either —

- (a) tubular streamers as specified in 9.2; or
- (b) at intervals of not more than 100 metres measured from the lowest part of the kite, streamers of not less than 80 cm long and 30 cm wide at their widest part and marked with alternate bands of red and white 10 cm wide.

**Airships**

10.1 Except as provided in 10.2, an airship while flying at night shall display the following steady lights:

ELEVENTH SCHEDULE — *continued*

- (a) a white light of at least 5 candela showing through angles of  $110^\circ$  from dead ahead to each side in the horizontal plane;
- (b) a green light of at least 5 candela showing to the starboard side through an angle of  $110^\circ$  from dead ahead in the horizontal plane;
- (c) a red light of at least 5 candela showing to the port side through an angle of  $110^\circ$  from dead ahead in the horizontal plane; and
- (d) a white light of at least 5 candela showing through angles of  $70^\circ$  from dead astern to each side in the horizontal plane.

10.2 An airship while flying at night shall display, if it is not under command, or has voluntarily stopped its engines, or is being towed, the following steady lights:

- (a) the white lights referred to in 10.1(a) and (d);
- (b) two red lights, each of at least 5 candela and showing in all directions suspended below the control car so that one is at least 4 metres above the other and at least 8 metres below the control car; and
- (c) if the airship is making way but not otherwise, the green and red lights referred to in 10.1(b) and (c):

Provided that an airship while picking up its moorings, notwithstanding that it is not under command, shall display only the lights specified in 10.1.

10.3 An airship, while moored within Singapore by night, shall display the following lights:

- (a) when moored to a mooring mast, at or near the rear a white light of at least 5 candela showing in all directions;
- (b) when moored otherwise than to a mooring mast —
  - (i) a white light of at least 5 candela showing through angles of  $110^\circ$  from dead ahead to each side in the horizontal plane; and
  - (ii) a white light of at least 5 candela showing through angles of  $70^\circ$  from dead astern to each side in the horizontal plane.

10.4 An airship while flying by day, if it is not under command, or has voluntarily stopped its engines, or is being towed, shall display two black balls suspended below the control car so that one is at least 4 metres above the other and at least 8 metres below the control car.

10.5 For the purpose of 10.1 to 10.4 —

ELEVENTH SCHEDULE — *continued*

- (a) an airship shall be deemed not to be under command when it is unable to execute a manoeuvre which it may be required to execute by or under this Part; and
- (b) an airship shall be deemed to be making way when it is not moored and is in motion relative to the air.

**Weather Reports and Forecasts**

11.1 Immediately before an aircraft flies the pilot-in-command of the aircraft shall examine the current reports and forecasts of the weather conditions on the proposed flight path, being reports and forecasts which it is reasonably practicable for him to obtain in order to determine whether Instrument Meteorological Conditions prevail or are likely to prevail during any part of the flight.

11.2 An aircraft which is unable to communicate by radio with an air traffic control unit at the aerodrome of destination shall not begin a flight to an aerodrome within a control zone if the information which it is reasonably practicable for the pilot-in-command of the aircraft to obtain indicates that it will arrive at that aerodrome when the ground visibility is less than 8 km or the cloud ceiling is less than 1,500 feet, unless the pilot-in-command of the aircraft has obtained from an air traffic control unit at that aerodrome permission to enter the aerodrome traffic zone.

**Right-hand Traffic Rule**

12. An aircraft which is flying within Singapore in sight of the ground and following a road, railway, canal or coastline, or any other line of landmarks, shall keep such line of landmarks on its left.

**Visual Signals**

13. The pilot-in-command of an aeroplane on, or in the traffic zone of an aerodrome shall observe such visual signals as may be displayed at, or directed to him from, the aerodrome by the authority of the person in charge of the aerodrome and shall obey any instruction which may be given to him by means of such signals:

Provided that he shall not be required to obey the signals referred to in rule 5.1 of Appendix 1 of Part I if in his opinion it is inadvisable to do so in the interests of safety.

**Dropping of Tow Ropes, etc.**

14. Tow ropes, banners or similar articles towed by aircraft shall not be dropped from aircraft except at an aerodrome and —

ELEVENTH SCHEDULE — *continued*

- (a) in accordance with arrangements made with an air traffic control unit at the aerodrome and with the aerodrome operator; and
- (b) in the area designated by a yellow cross with two arms 6 metres long by 1 metre wide at right angles and when the aircraft is flying in the direction appropriate for landing.

[S 278/2010 wef 15/05/2010]

**Special Rules for Certain Aerodromes**

15. The Chief Executive may make special rules for the operation of aircraft in the vicinity of notified aerodromes. Such special rules unless expressly stated otherwise, shall apply in addition to the other rules in this Schedule.

[S 278/2010 wef 15/05/2010]

**Low Flying**

16.1 Rules 4.6 and 5.1.2 of Part I shall not apply to an aircraft which is being used for police purposes.

16.2 Subject to paragraph 55A(4) and (7) of the Order, rules 4.6 and 5.1.2 of Part I shall not apply to military aircraft in an exhibition of flying organised by the Republic of Singapore Air Force in which the only participating aircraft are military aircraft.

16.3 Nothing in rules 4.6 and 5.1.2 of Part I shall prohibit any aircraft from flying in such a manner as may be necessary for the purpose of saving any life.

[S 423/2010 wef 02/08/2010]

**Formation Flights**

17.1 Rule 3.1.8 of Part I shall not apply to military aircraft.

17.2 Military aircraft shall not be flown in formation except by pre-arrangement among the pilots-in-command of the aircraft taking part in the flight and, for formation flight in controlled airspace, in accordance with the conditions prescribed by the appropriate ATS authority. These conditions shall include the following:

- (a) the formation operates as a single aircraft with regard to navigation and position reporting;
- (b) separation between aircraft in the flight shall be the responsibility of the flight leader and the pilots-in-command of the other aircraft in the flight and shall include periods of transition when aircraft are

ELEVENTH SCHEDULE — *continued*

manoeuvring to attain their own separation within the formation and during join-up and breakaway; and

- (c) a distance not exceeding 2 km (1 NM) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each military aircraft.

[S 570/2011 wef 04/10/2011]

**Helicopter operations**

18.1 Except as provided for in 18.2 and 18.3, a person must not operate a helicopter —

- (a) within the Changi Control Zone; or  
(b) overland and outside of an established heli-route,

except with, and in accordance with the terms of, the permission of the Chief Executive.

18.2 18.1 does not apply where, due to an emergency involving the operation of the helicopter, it is not reasonable or practicable —

- (a) to first obtain permission from the Chief Executive; or  
(b) to comply with the terms of that permission, if obtained.

18.3 18.1(b) does not apply to a person operating a helicopter for training, or for a test flight, within an area designated for such purpose in the Aeronautical Information Publication.

18.4 In this paragraph, “Changi Control Zone” means the control zone of that name, of such vertical and horizontal limits as notified in the Aeronautical Information Publication.

[S 278/2010 wef 15/05/2010]

[S 423/2010 wef 02/08/2010]

[S 570/2011 wef 04/10/2011]

[S 21/2015 wef 26/01/2015]

## TWELFTH SCHEDULE

*Paragraph 77*

## FEES

*Certificate of Registration (Paragraph 4 (8)).*



TWELFTH SCHEDULE — *continued*

1. The fee to be paid for the issue of a certificate of registration of an aircraft pursuant to paragraph 4 (8) of the Order shall be in accordance with the following scale:

where the maximum total weight —

(a) does not exceed 3,000 kg ... .. \$55

(b) exceeds 3,000 kg ... .. \$55

plus \$ 6.60 per 1,000 kg or  
part thereof in excess  
of 3,000 kg.

[S 67/98 wef 20/02/1998]

For the purposes of this paragraph, “maximum total weight” means the maximum total weight authorised in the Certificate of Airworthiness in force in respect of the aircraft, or if no such certificate is in force, in the Certificate of Airworthiness last in force in respect of that aircraft. In any other case “maximum total weight” means the maximum total weight authorised of the prototype or modification thereof to which the aircraft in the opinion of the Chief Executive conforms.

[S 278/2010 wef 15/05/2010]

2. [Deleted by S 683/2018 wef 09/10/2018]

*First issue of Certificate of Airworthiness (Paragraph 7(1) and (4)).*

3.—(1) Where an application is made for a Certificate of Airworthiness to be issued under paragraph 7(1) of the Order in respect of an aircraft, the fee to be paid for an investigation required by the Chief Executive under that paragraph is as follows:

(a) where the aircraft is in the Transport Category (Passenger), Transport Category (Cargo), Aerial Work Category or Private Category, the fee is \$198 per 1,000 kg of the aircraft’s maximum total weight or part thereof;

[S 497/2019 wef 15/07/2019]

(b) [Deleted by S 497/2019 wef 15/07/2019]

(c) where the aircraft is in the Special Category and —

TWELFTH SCHEDULE — *continued*

- (i) the maximum total weight authorised of the aircraft is 33,000 kg or less, the fee is \$6,600 for any year, or part of a year, of the period required for carrying out the investigation and all or any of the following fees, where applicable:
  - (A) if the aircraft is of a type that has not been registered in Singapore — \$4,900 for any year, or part of a year, of the period required for carrying out the investigation;
  - (B) if the aircraft is a used aircraft — \$3,300 for any year, or part of a year, of the period required for carrying out the investigation; or
- (ii) the maximum total weight authorised of the aircraft is above 33,000 kg, the fee is \$198 per 1,000 kg of the aircraft's, or part of the aircraft's, maximum total weight authorised for any year, or part of a year, of the period required for carrying out the investigation.

[S 497/2019 wef 15/07/2019]

(2) In this paragraph, “used aircraft” means an aircraft that does not meet the criteria for a new aircraft specified in paragraph 3.2 of Chapter 2.4 of the Singapore Airworthiness Requirements (SAR).

[S 616/2017 wef 31/10/2017]

*Export Certificate of Airworthiness (Paragraph 7A).*

3A. The fee for an application for an Export Certificate of Airworthiness in respect of an aircraft under paragraph 7A of the Order is \$2,750.

[S 181/2016 wef 01/05/2016]

4. [Deleted by S 497/2019 wef 15/07/2019]

*Second or Subsequent Issue or Renewal of Certificate of Airworthiness (Paragraph 7 (1) and (8)).*

5. When an application is made for the second or subsequent issue or the renewal of a Certificate of Airworthiness in pursuance of paragraph 7 (1) or (8) of the Order, the fee to be paid in respect thereof (including any investigation required in connection with the application) shall be \$198 per 1,000 kg maximum total weight or part thereof.

[S 497/2019 wef 15/07/2019]

TWELFTH SCHEDULE — *continued**Validation of Certificate of Airworthiness (Paragraph 7 (7) and (8)).*

6. The fee to be paid in respect of an application for —

- (a) the first issue of a certificate of validation of a Certificate of Airworthiness in respect of any aircraft in pursuance of paragraph 7 (7) of the Order (including any investigation required in connection with the application) shall be the same as the fee which would be paid under paragraph 3 in respect of an application for the first issue of a Certificate of Airworthiness in respect of that aircraft.
- (b) the second or subsequent issue or the renewal of such a certificate of validation in pursuance of paragraph 7 (7) and (8) of the Order shall be the same as the fee which would be paid under paragraph 5 of this Schedule in respect of the second or subsequent issue or the renewal of a Certificate of Airworthiness in respect of that aircraft.

[S 729/2010 wef 01/12/2010]

*Approval or certificate for design, production or distribution of aircraft, aircraft components or aircraft materials (Paragraph 8(1) and (2)).*

6A. The fee to be paid by an applicant for the issue of a certificate or other form of written approval under paragraph 8(1) and (2) of the Order for the design, production or distribution of aircraft, aircraft components or aircraft materials, is \$1,100 per annum for each branch of the applicant's organisation in a different geographical location for —

- (a) a Design Organisation Approval;
- (b) a Production Organisation Approval; or
- (c) a Certificate of Approval for Distributors specified in the Singapore Airworthiness Requirements (SAR).

[S 497/2019 wef 15/07/2019]

*Inspection, testing or evaluation (Paragraph 8(4)).*

6AA. Where any inspection, testing or evaluation is carried out in respect of a certificate or other form of written approval under paragraph 8(4) of the Order, the fee to be paid by an applicant for, or a holder of, the certificate or other form of written approval, as the case may be, is as follows:

- (a) where the application is made before 1 April 2018 — \$90 per man-hour or part of a man-hour of inspection, testing or evaluation;

TWELFTH SCHEDULE — *continued*

- (b) where the application is made on or after 1 April 2018 but before 1 April 2019 — \$100 per man-hour or part of a man-hour of inspection, testing or evaluation;
- (c) where the application is made on or after 1 April 2019 but before 1 April 2020 — \$120 per man-hour or part of a man-hour of inspection, testing or evaluation;
- (d) where the application is made on or after 1 April 2020 but before 1 April 2021 — \$150 per man-hour or part of a man-hour of inspection, testing or evaluation;
- (e) where the application is made on or after 1 April 2021 — \$170 per man-hour or part of a man-hour of inspection, testing or evaluation.

[S 616/2017 wef 31/10/2017]

*Certificate or approval for inspection, overhaul, repair, replacement and modification of aircraft or aircraft components (Paragraphs 8A(2) and 8B(2)).*

6B.—(1) The fee to be paid by an applicant for the first application made for any certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order is as follows:

- (a) \$13,300;
- (b) the following fees, according to the applicable rating under the certificate or other form of written approval:

<i>Rating Requested</i>	<i>Applicable Fee</i>
1. A1(BM)	\$9,700
2. A1(LM)	\$2,700
3. A2	\$6,100
4. A3	\$6,100
5. B1	\$7,600
6. B2	\$4,800
7. B3	\$4,800
8. Each C	\$1,500
9. Each D	\$1,500
10. Each MD	\$170.

TWELFTH SCHEDULE — *continued*

(2) Subject to sub-paragraph (6), the fee to be paid by an applicant for an application for renewal of any certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order that is issued before 31 October 2017 is as follows:

(a) where the certificate or other form of written approval expires on or after 1 April 2018 but before 1 April 2019 —

(i) \$380; and

(ii) the following fees, according to the applicable rating under the certificate or other form of written approval:

<i>Rating Requested</i>	<i>Applicable Fee</i>
1. A1(BM)	\$300
2. A1(LM)	\$80
3. A2	\$200
4. A3	\$200
5. B1	\$230
6. B2	\$150
7. B3	\$150
8. Each C	\$50
9. Each D	\$50
10. Each MD	\$8;

(b) where the certificate or other form of written approval expires on or after 1 April 2019 but before 1 April 2020 —

(i) \$1,100; and

(ii) the following fees, according to the applicable rating under the certificate or other form of written approval:

<i>Rating Requested</i>	<i>Applicable Fee</i>
1. A1(BM)	\$900
2. A1(LM)	\$250
3. A2	\$600

TWELFTH SCHEDULE — *continued*

4. A3	\$600
5. B1	\$700
6. B2	\$450
7. B3	\$450
8. Each C	\$150
9. Each D	\$150
10. Each MD	\$25;

(c) where the certificate or other form of written approval expires on or after 1 April 2020 but before 1 April 2021 —

- (i) \$2,300; and
- (ii) the following fees, according to the applicable rating under the certificate or other form of written approval:

<i>Rating Requested</i>	<i>Applicable Fee</i>
1. A1(BM)	\$1,800
2. A1(LM)	\$500
3. A2	\$1,200
4. A3	\$1,200
5. B1	\$1,400
6. B2	\$900
7. B3	\$900
8. Each C	\$300
9. Each D	\$300
10. Each MD	\$50;

(d) where the certificate or other form of written approval expires on or after 1 April 2021 —

- (i) \$3,900; and
- (ii) the following fees, according to the applicable rating under the certificate or other form of written approval:

TWELFTH SCHEDULE — *continued*

<i>Rating Requested</i>	<i>Applicable Fee</i>
1. A1(BM)	\$3,100
2. A1(LM)	\$900
3. A2	\$2,100
4. A3	\$2,100
5. B1	\$2,400
6. B2	\$1,600
7. B3	\$1,600
8. Each C	\$500
9. Each D	\$500
10. Each MD	\$90.

(3) Subject to sub-paragraph (6), the fee to be paid by an applicant for an application for renewal of any certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order that is issued on or after 31 October 2017 is as follows:

(a) \$3,900;

(b) the following fees, according to the applicable rating under the certificate or other form of written approval:

<i>Rating Requested</i>	<i>Applicable Fee</i>
1. A1(BM)	\$3,100
2. A1(LM)	\$900
3. A2	\$2,100
4. A3	\$2,100
5. B1	\$2,400
6. B2	\$1,600
7. B3	\$1,600
8. Each C	\$500
9. Each D	\$500
10. Each MD	\$90.

TWELFTH SCHEDULE — *continued*

(4) The fee to be paid by an applicant for the issuance or renewal of any certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order is \$1,100 for each branch of the applicant's organisation at a different address.

(5) The fee to be paid by a holder of a certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order for an application to add a rating to the certificate or other form of written approval, is as follows:

<i>Rating Requested</i>	<i>Applicable Fee</i>
1. A1(BM)	\$9,700
2. A1(LM)	\$2,700
3. A2	\$6,100
4. A3	\$6,100
5. B1	\$7,600
6. B2	\$4,800
7. B3	\$4,800
8. Each C	\$1,500
9. Each D	\$1,500
10. Each MD	\$170.

(6) Where an applicant for the renewal of a certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order is incorporated in a country other than Singapore and the Authority does not carry out an inspection or audit for the renewal of the certificate or other form of written approval, sub-paragraphs (2) and (3) do not apply to the applicant.

(7) In this paragraph, the rating —

“A1(BM)” means the conduct of base maintenance of an aeroplane with a maximum total weight authorised of above 5,700 kg;

“A1(LM)” means the conduct of line maintenance of an aeroplane with a maximum total weight authorised of above 5,700 kg;

“A2” means the conduct of maintenance of an aeroplane with a maximum total weight authorised of 5,700 kg or less;

“A3” means the conduct of maintenance of a helicopter;



TWELFTH SCHEDULE — *continued*

“B1” means the conduct of maintenance of a complete turbine engine;

“B2” means the conduct of maintenance of a complete piston engine;

“B3” means the conduct of maintenance of an auxiliary power unit;

“C” means the conduct of maintenance of any of the following components:

- (a) air conditioning and pressurisation systems (rating C1);
- (b) auto flight systems (rating C2);
- (c) communications and navigation systems (rating C3);
- (d) doors and hatches (rating C4);
- (e) electrical power and lighting systems (rating C5);
- (f) equipment (rating C6);
- (g) engine or auxiliary power unit components (other than complete engines or auxiliary power units) (rating C7);
- (h) flight control systems (rating C8);
- (i) fuel systems (rating C9);
- (j) helicopter rotor systems (rating C10);
- (k) helicopter transmission systems (rating C11);
- (l) hydraulic power systems (rating C12);
- (m) indicating and recording systems (rating C13);
- (n) landing gears (rating C14);
- (o) oxygen systems (rating C15);
- (p) propellers (rating C16);
- (q) pneumatic and vacuum systems (rating C17);
- (r) ice, rain or fire protection systems (rating C18);
- (s) windows (rating C19);
- (t) structure (rating C20);

“D” means the conduct of any of the following services:

- (a) non-destructive testing (rating D1);
- (b) other specialised services (rating D2);

“MD” means the distribution of any of the following materials:

TWELFTH SCHEDULE — *continued*

- (a) general aeronautical parts (rating MD1);
- (b) special aeronautical parts, including life limited parts (rating MD2).

[S 616/2017 wef 31/10/2017]

*Safety inspector fees in respect of certificate or other approval for maintenance of aircraft or aircraft components (Paragraphs 8A(2) and 8B(2)).*

6C.—(1) Subject to sub-paragraph (3), where it is necessary for a holder of, or an applicant for, a certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order to undergo any examination, test, inspection or investigation as a result of which it is necessary for a safety inspector of the Authority to conduct any test, audit, assessment, examination, inspection or investigation (called in this paragraph a function) in Singapore, the holder or applicant, as the case may be, must pay, in addition to the appropriate fee specified in this Schedule, a daily fee specified in sub-paragraph (2) for each day or part of each day that the safety inspector conducts any function.

(2) The daily fee mentioned in sub-paragraph (1) is —

- (a) where the function is performed on or after 1 April 2018 but before 1 April 2019 — \$700;
- (b) where the function is performed on or after 1 April 2019 but before 1 April 2020 — \$900;
- (c) where the function is performed on or after 1 April 2020 but before 1 April 2021 — \$1,200; and
- (d) where the function is performed on or after 1 April 2021 — \$1,500.

(3) Sub-paragraph (1) does not apply to the holder of, or an applicant for, a certificate or other form of written approval under paragraph 8A(2) or 8B(2) of the Order, in respect of a safety inspector's conduct of any function, where the holder or applicant, as the case may be, is to pay a fee under paragraph 6B(1), (2), (3) or (5) of this Schedule in respect of the certificate or other form of written approval.

[S 616/2017 wef 31/10/2017]

*Approval of persons, simulators and courses of training or instruction (Paragraphs 11(9)(c), 20(13)(c) and (d), 23A(3)(a) and 73A).*

7.—(1) The fee to be paid by a person for the grant of an approval for the

TWELFTH SCHEDULE — *continued*

purposes of paragraph 73A of the Order shall be \$1,100 per annum for each branch of the person's organisation in a different geographical location.

*[S 278/2010 wef 15/05/2010]*

(2) The fee to be paid for the grant of an approval of a person to provide a course of training or instruction under paragraph 11(9)(c) of the Order shall be \$1,100 per annum for each branch of the person's organisation in a different geographical location.

*[S 640/2006 wef 30/11/2006]*

(3) The fee to be paid for the grant of an approval or renewal of approval for an approved flying school to provide a course of training or instruction under paragraph 20(13)(c) of the Order shall be \$4,500 per annum.

(4) The fee to be paid for the grant of approval or renewal of approval for the use of a flight simulation training device for the purpose of flight training or testing under paragraph 20(13)(d) or 23A(3)(a) of the Order shall be \$1,100 for each year for which the approval is valid.

*[S 331/2005 wef 02/06/2005]*

*[S 348/2013 wef 17/06/2013]*

*[S 683/2018 wef 09/10/2018]*

8. *[Deleted by S 683/2018 wef 09/10/2018]*

9. *[Deleted by S 683/2018 wef 09/10/2018]*

10. *[Deleted by S 497/2019 wef 01/08/2019]*

*Aircraft Maintenance Licence (Paragraph 11).*

11. The fees to be paid in respect of an aircraft maintenance licence in pursuance of paragraph 11 of the Order shall be —

- (a) in respect of each examination paper for either —
  - (i) the grant of a licence;
  - (ii) the renewal of a licence (if required); or

TWELFTH SCHEDULE — *continued*

- (iii) an inclusion or extension of a rating included \$80  
in a licence ... ..

[S 729/2010 wef 01/12/2010]

[S 124/2012 wef 02/04/2012]

- (aa) in respect of the cancellation by a candidate of a \$30  
booking for an examination paper referred to in  
sub-paragraph (a)

[S 729/2010 wef 01/12/2010]

[S 124/2012 wef 02/04/2012]

- (ab) in respect of the re-scheduling by a candidate of an \$20  
examination paper referred to in sub-paragraph (a)

[S 729/2010 wef 01/12/2010]

[S 124/2012 wef 02/04/2012]

- (b) in respect of the grant or renewal of a licence \$132

- (c) in respect of the inclusion of an additional rating in a \$66  
licence, for each additional rating

[S 487/2006 wef 11/08/2006]

[S 729/2010 wef 01/12/2010]

[S 124/2012 wef 02/04/2012]

*Licences for Flight Crew (Paragraph 20 (1)) and Rating therein (Paragraph 20 (3) and (4)).*

12.—(1) The following fees shall be paid on application for the grant or renewal of:

- (a) an Airline Transport Pilot's Licence (Aeroplanes), an Airline Transport Pilot's Licence (Helicopters and Gyroplanes), a Commercial Pilot's Licence (Aeroplanes), a Commercial Pilot's Licence (Helicopters and Gyroplanes) or a Multi-crew Pilot's Licence (Aeroplanes) —

(i) for a period of 6 months \$72

(ii) for a period of 12 months \$144

[S 570/2011 wef 04/10/2011]

TWELFTH SCHEDULE — *continued*

(b) a Commercial Pilot's Licence (Balloons), a Commercial Pilot's Licence (Airships), a Commercial Pilot's Licence (Glider), a Private Pilot's Licence (Aeroplanes), a Private Pilot's Licence (Helicopters and Gyroplanes) or a Private Pilot's Licence (Balloons and Airships) —

- |                                 |         |
|---------------------------------|---------|
| (i) for a period of 6 months    | \$19.50 |
| (ii) for a period of 12 months  | \$39    |
| (iii) for a period of 24 months | \$78    |

[S 617/2012 wef 17/12/2012]

- |                                |       |
|--------------------------------|-------|
| (iv) for a period of 60 months | \$195 |
|--------------------------------|-------|

[S 640/2006 wef 30/11/2006]

[S 124/2012 wef 02/04/2012]

(c) a Student Pilot's Licence ... .. \$28

(d) [*Deleted by S 497/2019 wef 15/07/2019*]

(e) [*Deleted by S 497/2019 wef 15/07/2019*]

(f) a Flight Radiotelephony Operator's Licence ... .. \$28

. ...

[S 497/2019 wef 15/07/2019]

[S 166/2002 wef 15/04/2002]

(1A) Where an application for a Commercial Pilot's Licence or an Airline Transport Pilot's Licence is based on an equivalent licence granted by a Contracting State other than Singapore, a fee of \$345 shall be paid by the applicant, in addition to the relevant fee payable under sub-paragraph (1).

[S 348/2013 wef 17/06/2013]

(1B) Where an application for a Multi-crew Pilot's Licence, a Commercial Pilot's Licence or an Airline Transport Pilot's Licence is based on a qualification other than an equivalent licence granted by a Contracting State other than Singapore, a fee of \$83 shall be paid by the applicant, in addition to the relevant fee payable under sub-paragraph (1).

[S 348/2013 wef 17/06/2013]

[S 21/2015 wef 26/01/2015]

TWELFTH SCHEDULE — *continued*

(2) The following fees shall be paid on application for the grant or renewal of any licence to act as a member of the flight crew of an aircraft or for the inclusion or renewal of a rating in such a licence, in respect of such of the following examinations as may be required —

- (a) [*Deleted by S 497/2019 wef 15/07/2019*]
- (b) [*Deleted by S 21/2015 wef 26/01/2015*]
- (c) for a technical examination on application for the inclusion of an aircraft rating for a single type of aircraft in a licence or for the extension of such a rating to include any additional type of aircraft ... ..  
 ... .. \$55  
*[S 487/2006 wef 11/08/2006]*
- (d) [*Deleted by S 497/2019 wef 15/07/2019*]
- (e) [*Deleted by S 423/2010 wef 02/08/2010*]
- (f) [*Deleted by S 497/2019 wef 15/07/2019*]
- (g) for a flying test \$132  
*[S 570/2011 wef 04/10/2011]*
- (h) for a medical evaluation conducted —
- (i) before 17 August 2019 \$115
- (ii) on or after 17 August 2019 \$130  
*[S 497/2019 wef 15/07/2019]*
- (i) [*Deleted by S 21/2015 wef 26/01/2015*]
- (j) [*Deleted by S 21/2015 wef 26/01/2015*]
- (k) for any examination or re-examination paper to be taken —
- (i) in respect of the grant or renewal of a Private Pilot's Licence \$124
- (ii) in respect of the grant or renewal of a Multi-crew Pilot's Licence, Commercial Pilot's Licence or Airline Transport Pilot's Licence \$155

TWELFTH SCHEDULE — *continued*

- (iii) for the inclusion of a rating other than an aircraft rating in any licence to act as a member of a flight crew \$155

[S 21/2015 wef 26/01/2015]

- (l) for cancellation by a candidate of a booking for an examination paper referred to in sub-paragraph (k) \$30

[S 617/2012 wef 17/12/2012]

- (m) for re-scheduling by a candidate of an examination paper referred to in sub-paragraph (k). \$20

[S 573/91 wef 01/01/1992]

[S 166/2002 wef 15/04/2002]

[S 487/2006 wef 11/08/2006]

[S 640/2006 wef 30/11/2006]

[S 423/2010 wef 02/08/2010]

[S 570/2011 wef 04/10/2011]

[S 124/2012 wef 02/04/2012]

[S 617/2012 wef 17/12/2012]

[S 348/2013 wef 17/06/2013]

[S 21/2015 wef 26/01/2015]

[S 181/2016 wef 01/05/2016]

13. Where an application is made for the issue of a certificate of validation of a licence under this Order the following fees shall be paid:

- (a) for a technical examination (if required) In each case of the fee appropriate to the grant of a licence equivalent to that for which validation is sought.

- (b) for a medical examination (if required)

[S 487/2006 wef 11/08/2006]

- (c) for a flying test (if required)

[S 487/2006 wef 11/08/2006]

TWELFTH SCHEDULE — *continued*

(d) for a certificate

*[S 487/2006 wef 11/08/2006]**Copies of Documents.*

14. The fee to be paid for the issue by the Minister or the Chief Executive of a copy or replacement of a document issued under this Order shall be \$33.

*[S 497/2019 wef 15/07/2019]**[S 278/2010 wef 15/05/2010]**Permit for carriage of munitions of war (Paragraph 50C).*

15. The fees to be paid for the issue of a permit for carriage of munitions of war shall be as follows:

(a) ad hoc permit for a single return flight \$45

*[S 199/93 wef 01/08/1993]*

(b) block permit for more than 10 return flights over a period of 6 months \$380.

*[S 199/93 wef 01/08/1993]**[S 423/2010 wef 02/08/2010]**Permit for carriage of dangerous goods (Paragraph 50D).*

16. The fees to be paid for the issue of a permit for carriage of dangerous goods shall be as follows:

(a) ad hoc permit for a single return flight \$50

*[S 199/93 wef 01/08/1993]**[S 423/2010 wef 02/08/2010]*

(b) block permit for more than 10 return flights over a period of 6 months ... .. \$600.

*[S 199/93 wef 01/08/1993]**[S 423/2010 wef 02/08/2010]**Aerodrome (helipad) licence (Paragraph 67).*

17. The fee to be paid for the issue of an aerodrome (helipad) licence is \$1,000 per annum.



TWELFTH SCHEDULE — *continued*

*Fees where functions are performed abroad.*

18.—(1) Subject to sub-paragraph (3), where it is necessary for a holder of, or an applicant for, an aviation safety instrument to undergo any examination, test, inspection or investigation for the purpose of this Order as a result of which it is necessary for a safety inspector of the Authority to travel outside Singapore to conduct any test, audit, assessment, examination, inspection or investigation (called in this paragraph a function), the holder or applicant, as the case may be, must pay, in addition to the appropriate fee specified in this Schedule, a charge equal to any additional cost incurred by the Authority plus a daily fee specified in sub-paragraph (2) for each day or part of each day that the safety inspector is outside Singapore while conducting any function.

(2) The daily fee mentioned in sub-paragraph (1) is —

(a) where the function is performed before 1 April 2018 —

(i) \$1,280 for a flight operations safety inspector; and

(ii) \$610 for any other safety inspector;

(b) where the function is performed on or after 1 April 2018 but before 1 April 2019 —

(i) \$1,400 for a flight operations safety inspector; and

(ii) \$700 for any other safety inspector;

(c) where the function is performed on or after 1 April 2019 but before 1 April 2020 —

(i) \$1,700 for a flight operations safety inspector; and

(ii) \$900 for any other safety inspector;

(d) where the function is performed on or after 1 April 2020 but before 1 April 2021 —

(i) \$2,000 for a flight operations safety inspector; and

(ii) \$1,200 for any other safety inspector; and

(e) where the function is performed on or after 1 April 2021 —

(i) \$2,400 for a flight operations safety inspector; and

(ii) \$1,500 for any other safety inspector.

(3) The holder of, or an applicant for, an aviation safety instrument is not required to pay the daily fee mentioned in sub-paragraph (1) in respect of a safety inspector's conduct of any function if the holder or applicant, as the case may be,

TWELFTH SCHEDULE — *continued*

is to pay a fee under paragraph 6B(1), (2), (3) or (5) of this Schedule in respect of the aviation safety instrument.

[S 616/2017 wef 31/10/2017]

*Permission to organise an exhibition of flying (Paragraph 55A).*

19. The fee to be paid for the grant of a written permission to organise an exhibition of flying shall be \$ 20,000.

[S 49/92 wef 01/02/1992]

[S 423/2010 wef 02/08/2010]

20. [Deleted by S 683/2018 wef 09/10/2018]

*Operations permit application fee (Paragraph 87A)*

20A.—(1) The fee to be paid for the grant, renewal or variation of an operations permit under paragraph 87A(5) of the Order shall be as follows:

(a) for the grant or renewal of an operations permit with a validity period of —

(i) up to one year — \$300;

(ii) 3 years — \$450; and

(iii) 5 years — \$600;

(b) for the variation of an operations permit — \$33.

(2) In addition to the fee stipulated in sub-paragraph (1), the fee to be paid for the assessment of an aircraft for inclusion in the operations permit shall be \$40 for each aircraft to be assessed.

[S 348/2013 wef 17/06/2013]

*Aerodrome certificate (Paragraph 67(2))*

21.—(1) The fee to be paid for the grant of an aerodrome certificate shall be \$150,000, which shall accompany the application under paragraph 67(2) of the Order.

(2) The annual fee for an aerodrome certificate shall be as follows:

(a) for an aerodrome with one runway — \$200,000;

(b) for an aerodrome with 2 runways — \$400,000; and

TWELFTH SCHEDULE — *continued*

(c) for an aerodrome with 3 or more runways — \$600,000.

[S 299/2009 wef 30/06/2009]

*UA operator permit for unmanned aircraft (Paragraphs 72G and 72I)*

22.—(1) The total of the following fees must be paid for an application for the grant of a UA operator permit for one or more unmanned aircraft:

- |  |       |
|--|-------|
| (a) for the first type of unmanned aircraft                                    | \$600 |
| (b) for each additional type of unmanned aircraft specified in the application | \$400 |

(2) The fee for an application to renew a UA operator permit is \$200, except that the fee in sub-paragraph (3) must be paid in addition if the application is also an application to vary the UA operator permit.

(3) The fee for an application to vary a UA operator permit because of an addition or substitution of any type of unmanned aircraft specified in the permit is \$400 for each type of unmanned aircraft added or substituted.

[S 351/2015 wef 02/06/2015]

*Activity permit for unmanned aircraft operations (Paragraph 72H)*

23.—(1) The following fees must be paid for an application for the grant of a Class 1 activity permit for an unmanned aircraft:

- |  |      |
|--|------|
| (a) for the first application  | \$75 |
| (b) for any subsequent application without any change in the unmanned aircraft or type of unmanned aircraft or place of operation of that aircraft | \$25 |

(2) The following fees must be paid for an application for the grant of a Class 2 activity permit for an unmanned aircraft:

- |                               |      |
|-------------------------------|------|
| (a) for the first application | \$60 |
|-------------------------------|------|

TWELFTH SCHEDULE — *continued*

- (b) for any subsequent application \$20  
without any change in the  
unmanned aircraft or type of  
unmanned aircraft or place of  
operation of that aircraft

*[S 351/2015 wef 02/06/2015]*

THIRTEENTH SCHEDULE

*Paragraph 80*

PENALTIES

PART A — PROVISIONS REFERRED TO IN PARAGRAPH 80 (5)

Paragraph 3.

Paragraph 5.

Paragraph 10(5).

Paragraph 15.

Paragraph 16(3).

Paragraph 20(12A).

Paragraph 20A.

Paragraph 22.

Paragraph 24.

*[Deleted by S 683/2018 wef 09/10/2018]*

*[Deleted by S 683/2018 wef 09/10/2018]*

*[Deleted by S 683/2018 wef 09/10/2018]*

Paragraph 50G(1) and (2).

*[Deleted by S 683/2018 wef 09/10/2018]*

*[Deleted by S 683/2018 wef 09/10/2018]*

Paragraph 50E, in respect of paragraph 7(1) and (2) of Part II, and paragraph 2(1) and (1A) of Part IV, of Nineteenth Schedule.

Paragraph 51.

*[Deleted by S 683/2018 wef 09/10/2018]*

THIRTEENTH SCHEDULE — *continued*

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

Paragraph 55A.

[Deleted by S 683/2018 wef 09/10/2018]

Paragraph 59.

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 180/92 wef 01/05/1992]

Paragraph 64.

Paragraph 64A.

Paragraph 64B.

[Deleted by S 351/2015 wef 02/06/2015]

Paragraph 64D.

Paragraph 64E.

Paragraph 64G.

Paragraph 67A(1).

Paragraph 67G.

Paragraph 69.

Paragraph 72(1), (2), (3), (8) and (9).

Paragraph 72A(1) and (3).

Paragraph 72E.

Paragraph 72F(1), (2) or (3).

Paragraph 72J.

Paragraph 72K(2).

[Deleted by S 683/2018 wef 09/10/2018]

THIRTEENTH SCHEDULE — *continued*

[*Deleted by S 683/2018 wef 09/10/2018*]

[*S 49/92 wef 01/02/1992*]

[*S 180/92 wef 01/05/1992*]

[*S 640/2006 wef 30/11/2006*]

[*S 299/2009 wef 30/06/2009*]

[*S 423/2010 wef 02/08/2010*]

[*S 570/2011 wef 04/10/2011*]

[*S 617/2012 wef 17/12/2012*]

[*S 348/2013 wef 17/06/2013*]

[*S 351/2015 wef 02/06/2015*]

[*S 803/2015 wef 30/12/2015*]

[*S 683/2018 wef 09/10/2018*]

PART B — PROVISIONS REFERRED TO IN PARAGRAPH 80 (6)

[*Deleted by S 683/2018 wef 09/10/2018*]

Paragraph 8.

Paragraph 8A.

Paragraph 9(1).

Paragraph 10 (except sub-paragraph (5)).

Paragraph 11(7) and (8).

[*Deleted by S 683/2018 wef 09/10/2018*]

[*Deleted by S 683/2018 wef 09/10/2018*]

[*Deleted by S 683/2018 wef 09/10/2018*]

Paragraph 16 (except sub-paragraph (3)).

Paragraph 17A.

[*Deleted by S 683/2018 wef 09/10/2018*]

Paragraph 19.

Paragraph 20(2), (3C), (7), (12) and (14).

Paragraph 23.

Paragraph 23A(1).

THIRTEENTH SCHEDULE — *continued*

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

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[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

Paragraph 50C.

Paragraph 50D(1) and (2).

Paragraph 50DA.

Paragraph 50DB.

Paragraph 50E, in respect of paragraphs 1, 2, 3, 4(2) and 7(3) of Part II, and paragraph 1 of Part III, of Nineteenth Schedule.

Paragraph 50F(4).

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

[Deleted by S 683/2018 wef 09/10/2018]

Paragraph 62(3) and (5).

THIRTEENTH SCHEDULE — *continued*

Paragraph 62A(1).

Paragraph 62F.

Paragraph 62G(1) and (2).

Paragraph 63.

[*Deleted by S 617/2012 wef 17/12/2012*]

[*Deleted by S 683/2018 wef 09/10/2018*]

Paragraph 67(1).

Paragraph 67C.

Paragraph 67E(2) and (3).

Paragraph 67F.

Paragraph 67H.

Paragraph 67I.

Paragraph 67J(1) and (2).

Paragraph 67K.

Paragraph 67L(2).

Paragraph 71.

Paragraph 72A(4).

Paragraph 76.

[*Deleted by S 683/2018 wef 09/10/2018*]

Paragraph 87A(1) and (8).



THIRTEENTH SCHEDULE — *continued*

Paragraph 88.

*[S 49/92 wef 01/02/1992]*

*[S 180/92 wef 01/05/1992]*

*[S 331/2005 wef 02/06/2005]*

*[S 487/2006 wef 11/08/2006]*

*[S 299/2009 wef 30/06/2009]*

*[S 278/2010 wef 15/05/2010]*

*[S 423/2010 wef 02/08/2010]*

*[S 617/2012 wef 17/12/2012]*

*[S 348/2013 wef 17/06/2013]*

*[S 351/2015 wef 02/06/2015]*

*[S 803/2015 wef 30/12/2015]*

*[S 589/2016 wef 18/11/2016]*

*[S 683/2018 wef 09/10/2018]*

## FOURTEENTH SCHEDULE

Paragraphs 2(1), 20, 62A and 62E(1)

MEDICAL EXAMINATION AND  
MEDICAL FITNESS REQUIREMENTS

1. This Schedule specifies the medical examination and medical fitness requirements for the grant and renewal of a licence to a flight crew member under paragraph 20(1)(a) to (k) of the Order and to an air traffic controller under paragraph 62A of the Order.

*[S 497/2019 wef 15/07/2019]*

2. Every applicant for the grant or renewal of a flight crew member licence or an air traffic controller licence shall —

- (a) be free from any congenital or acquired abnormality or any active, latent, acute or chronic disability or any effect or side-effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken or to be taken by him, which would result in any functional incapacity likely to interfere with the safe operation of an aircraft or with the performance in a safe manner of the functions to which such licence relates; and

FOURTEENTH SCHEDULE — *continued*

- (b) undergo a medical examination for the purpose of ascertaining whether his physical and mental conditions satisfy the required standard of medical fitness applicable to such licence, as specified in paragraph 7.

3.—(1) The medical examination referred to in paragraph 2(b) shall be conducted in Singapore or elsewhere by a designated medical examiner.

(2) The designated medical examiner shall evaluate whether the applicant satisfies the standard of medical fitness required for the licence for which the applicant has applied for a grant or renewal and submit a report of his evaluation to the medical assessor for assessment and clearance.

[S 617/2012 wef 17/12/2012]

(3) Where —

(a) the applicant does not meet the medical fitness requirements specified in paragraph 7; or

(b) the medical case is complicated or unusual,

the designated medical examiner shall refer the case to a medical assessor for assessment, evaluation and clearance.

[S 617/2012 wef 17/12/2012]

4. An applicant who presents himself for the medical examination referred to in paragraph 2(b) shall be required to furnish —

(a) a declaration signed by him stating —

(i) whether he has previously undergone such medical examination, and if so, the place, date and result of such medical examination; and

(ii) in a case where the medical examination has been previously refused, revoked or suspended, the reason for such refusal, revocation or suspension; and

(b) a complete and accurate statement of the medical facts concerning his personal, family and hereditary history, personally certified by him.

5. An applicant who has been assessed by the medical assessor as not having satisfied the standard of medical fitness required for the licence for which he has applied for a grant or renewal may, at the discretion of the Chief Executive, be accepted as eligible for such grant or renewal if —

(a) accredited medical conclusion indicates that in specific circumstances, the applicant's failure to meet any requirement, whether numerical or otherwise, will not affect the performance of the functions to which his licence relates in a manner which is likely to jeopardise flight safety;

FOURTEENTH SCHEDULE — *continued*

- (b) the relevant ability, skill and experience of the applicant have been given due consideration; and
- (c) the licence is endorsed with any special restrictions or conditions which must be complied with to ensure the performance in a safe manner of the functions to which the licence relates.

[S 423/2010 wef 02/08/2010]

[S 617/2012 wef 17/12/2012]

6. If an applicant for the renewal of a licence is, during the period he is required to undergo the medical examination referred to in paragraph 2(b), on duty as a member of the flight crew of an aircraft in a distant location outside Singapore where a designated medical examiner is not available, the Chief Executive may, on application and in his discretion, allow the medical examination to be deferred on an exceptional basis subject to the following conditions:

- (a) the period for which the medical examination is deferred does not exceed —
  - (i) a period of 6 consecutive months in the case of a flight crew member of a private category aircraft;
  - (ii) a period of 6 consecutive months in the case of a member of the operating crew of a transport category or aerial work category aircraft; or
  - (iii) a period of 24 consecutive months in the case of a private pilot;
- (b) the applicant has, in the location in which he is situated, undergone the medical examination referred to in paragraph 2(b) by a qualified medical practitioner acceptable to the Chief Executive; and
- (c) the report of such medical practitioner has been evaluated by a medical assessor who has assessed the applicant's medical fitness as satisfactory.

[S 423/2010 wef 02/08/2010]

[S 617/2012 wef 17/12/2012]

7. The medical examination and medical fitness requirements applicable to the various classes of licence granted or renewed under paragraphs 20(1)(a) to (k) and 62A of the Order are as follows:

- (a) Class 1 Medical Requirements (as specified in the Singapore Air Safety Publication (SASP)) —
  - (i) Commercial pilot's licence (aeroplanes);
  - (ii) Commercial pilot's licence (helicopters and gyroplanes);

FOURTEENTH SCHEDULE — *continued*

- (iii) Airline transport pilot's licence (aeroplanes);
- (iv) Airline transport pilot's licence (helicopters and gyroplanes);
- (v) Commercial pilot's licence (airships);
- (vi) Multi-crew Pilot's Licence (Aeroplanes);

[S 640/2006 wef 30/11/2006]

[S 570/2011 wef 04/10/2011]

(b) Class 2 Medical Requirements (as specified in the Singapore Air Safety Publication (SASP)) —

- (i) Student pilot's licence;
- (ii) Private pilot's licence (aeroplanes);
- (iii) Private pilot's licence (helicopters and gyroplanes);
- (iv) Private pilot's licence (balloons and airships);
- (v) Commercial pilot's licence (balloons);
- (vi) [*Deleted by S 640/2006 wef 30/11/2006*]
- (vii) Commercial pilot's licence (gliders);
- (viii) [*Deleted by S 497/2019 wef 15/07/2019*]
- (ix) [*Deleted by S 497/2019 wef 15/07/2019*]

(c) Class 3 Medical Requirements (as specified in the Singapore Air Safety Publication (SASP)) —

Air traffic controller licence.

[S 497/2019 wef 15/07/2019]

8. Notwithstanding paragraph 7, an applicant for or a holder of a Private pilot's licence (aeroplanes) or a Private pilot's licence (helicopters) who also applies for or has been granted an Instrument Rating (Aeroplanes) or Instrument Rating (Helicopters), as the case may be, shall also satisfy Class 1 Medical Requirements (as specified in the Singapore Air Safety Publication (SASP)).

[S 487/2006 wef 11/08/2006]

## FIFTEENTH SCHEDULE

[*Deleted by S 683/2018 wef 09/10/2018*]

## SIXTEENTH SCHEDULE

[Deleted by S 683/2018 wef 09/10/2018]

## SEVENTEENTH SCHEDULE

Paragraph 62A(7)

## AIR TRAFFIC CONTROLLER RATINGS

1. The following ratings may be specified in an air traffic controller licence in respect of air traffic services:

- (a) aerodrome control rating, which shall authorise the holder of the air traffic controller licence to provide or supervise the provision of aerodrome control service, or both;
- (b) approach control surveillance rating, which shall authorise the holder of the licence to provide or supervise the provision of approach control service, or both;

[S 299/2009 wef 30/06/2009]

- (c) area control procedural rating, which shall authorise the holder of the licence to provide or supervise the provision of area control service, or both;

[S 299/2009 wef 30/06/2009]

- (d) area control surveillance rating, which shall authorise the holder of the licence to provide or supervise the provision of area control service, or both.

[S 299/2009 wef 30/06/2009]

2. A rating specified in an air traffic controller licence shall become invalid when an air traffic controller has not provided the air traffic service specified in that rating for a period of 6 months or more.

3. If a rating specified in an air traffic controller licence becomes invalid, that rating shall remain invalid until the Chief Executive is satisfied that the ability to provide the air traffic service specified in that rating by the air traffic controller concerned has been re-established.

[S 325/2000 wef 01/08/2000]

[S 729/2010 wef 02/08/2010]

## EIGHTEENTH SCHEDULE

Paragraph 67(3)(a) and (4)(b)

## AERODROME MANUAL

**Section A — Format of the aerodrome manual**

1. The aerodrome manual shall —
  - (a) be typewritten or printed, and signed by the aerodrome operator;
  - (b) be in a format that is easy to revise;
  - (c) have a system for recording the currency of the pages and amendments thereto, including a page for logging revisions; and
  - (d) be organised in a manner that will facilitate the preparation, review and acceptance or approval process.

**Section B — Organisation of the Aerodrome Manual**

2. The aerodrome operator shall include the following particulars in an aerodrome manual, to the extent that they are applicable to the aerodrome, under the following parts:

**Part 1.** General information on the purpose and scope of the aerodrome manual; the legal requirement for an aerodrome certificate and an aerodrome manual as prescribed under this Order; conditions for use of the aerodrome; the aeronautical information services, air traffic services, meteorological services and security provision available and the procedures for their promulgation; the system for recording aircraft movements and the obligations of the aerodrome operator as specified in paragraphs 67, 67A and 67C to 67L of this Order.

**Part 2.** Particulars of the aerodrome site.

**Part 3.** Particulars of the aerodrome required to be reported to the Aeronautical Information Services provider.

**Part 4.** The aerodrome operating procedures and safety measures. This may include references to air traffic procedures such as those relevant to low-visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross-reference to the aerodrome manual.

**Part 5.** Details of the aerodrome administration and the safety management system.

[S 423/2010 wef 02/08/2010]

**Section C — Particulars to be included in an aerodrome manual**

EIGHTEENTH SCHEDULE — *continued*

3. The particulars to be included in an aerodrome manual shall be as specified in the Manual of Aerodrome Standards.

[S 440/2003 wef 15/09/2003]

## NINETEENTH SCHEDULE

Paragraphs 50D(6), 50E(1) and (2) and  
50F(1), (2) and (3)

## PART I

## DEFINITIONS

In this Schedule, unless the context otherwise requires —

“acceptance checklist” means a document used to assist in carrying out a check on the external appearance of packages of munitions of war or dangerous goods and their associated documents to determine that all appropriate requirements have been met;

“overpack” means an enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage;

“package” means the complete product of the packing operation consisting of the packaging and its contents prepared for transport;

“packaging” means receptacles and any other components or materials necessary for the receptacle to perform its containment function;

“unit load device” means any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

## PART II

## OPERATORS' RESPONSIBILITIES

1. The operator of any aircraft, or any agent of the operator, shall not accept any munitions of war or dangerous goods for carriage by air unless —

(a) the munitions of war or dangerous goods are accompanied by a completed and properly executed dangerous goods transport document and a signed declaration, except where the Technical Instructions specify that such a document is not required; and

(b) the package, overpack or freight container containing the munitions of war or dangerous goods has been inspected in accordance with the

NINETEENTH SCHEDULE — *continued*

acceptance procedures contained in the Technical Instructions and all accompanying transport documents have been verified.

2.—(1) For the purposes of each of the inspections required by paragraphs 1 and 3, the operator of an aircraft, or any agent of the operator, shall develop and use an acceptance checklist and the results of the inspections shall be recorded therein.

(2) The acceptance checklist shall be in such form and shall provide for the entry of such details as will enable the relevant inspection to be fully and accurately made by reference to the completion of that list.

3. The operator of any aircraft on which munitions of war or dangerous goods are to be carried, or any agent of the operator, shall ensure that —

- (a) all packages and overpacks containing munitions of war or dangerous goods and freight containers containing radioactive materials are loaded, properly secured and stowed on an aircraft in accordance with the provisions of the Technical Instructions;
- (b) before a unit load device is loaded on board the aircraft, the device has been inspected and found free from any evidence of leakage from, or damage to, any munitions of war or dangerous goods contained therein;
- (c) no leaking or damaged packages, overpacks or freight containers are loaded on the aircraft;
- (d) no munitions of war or dangerous goods are carried in an aircraft cabin occupied by passengers or on the flight deck of the aircraft, except in circumstances permitted by the provisions of the Technical Instructions;
- (e) any hazardous contamination found on the aircraft as a result of leakage or damage to munitions of war or dangerous goods is removed without delay and if the aircraft has been contaminated by radioactive materials, it shall immediately be taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions;
- (f) any packages containing munitions of war or dangerous goods which might react dangerously one with another shall not be stowed on the aircraft next to each other or in a position that would allow interaction between them in the event of leakage;



NINETEENTH SCHEDULE — *continued*

- (g) any packages of toxic or infectious substances shall be stowed on the aircraft in accordance with the provisions of the Technical Instructions;
- (h) any packages of radioactive materials shall be separated from persons, live animals and undeveloped film, in accordance with the provisions in the Technical Instructions, when stowed on the aircraft;
- (i) the goods are secured in the aircraft in such a manner that will prevent any movement in flight which would change the orientation of the packages or which would cause damage to the packages;
- (j) in the case of packages containing radioactive materials, the securing shall be adequate to ensure that the separation requirements as specified in the Technical Instructions are met at all times;
- (k) packages of munitions of war or dangerous goods bearing the “Cargo aircraft only” label must be loaded in accordance with the provisions in the Technical Instructions; and
- (l) passengers are warned as to the type of goods that they are prohibited from transporting on board the aircraft as checked baggage or carry-on articles.

4.—(1) The operator of any aircraft flying for the purposes of public transport shall ensure that all flight crew members and other employees are provided with such information and training as will enable them to carry out their responsibilities with regard to the carriage of munitions of war or dangerous goods, including the actions to be taken in the event of emergencies involving munitions of war or dangerous goods.

(2) The operator of any aircraft on which munitions of war or dangerous goods are to be carried as cargo, or any agent of the operator, must ensure that, as soon as practicable and before any flight begins, the pilot-in-command of the aircraft is provided with such information as is specified in Part 7 of the Technical Instructions.

5. The operator of a Singapore aircraft which is involved —

- (a) in a dangerous goods accident whilst carrying any dangerous goods as cargo on the aircraft; or
- (b) in a dangerous goods incident in which, in the reasonable opinion of the operator, dangerous goods carried as cargo on the aircraft may be involved,

NINETEENTH SCHEDULE — *continued*

shall provide information, without delay, to emergency services or rescue personnel responding to the dangerous goods accident or dangerous goods incident and the appropriate authorities and the State in which the dangerous goods accident or dangerous goods incident occurred about the dangerous goods on board, as shown on the written information to the pilot-in-command.

6. In the event of any in-flight emergency, the operator of the aircraft shall require its pilot-in-command carrying munitions of war or dangerous goods as cargo to inform the appropriate air traffic services unit, as soon as the situation permits, of those munitions of war or dangerous goods in detail or as a summary or by reference to the location from where the detailed information can be obtained immediately.

7.—(1) The operator of any aircraft on which munitions of war or dangerous goods are to be carried, or any agent of the operator, shall ensure that all packages or overpacks containing munitions of war or dangerous goods and freight containers containing radioactive materials are inspected for signs of damage or leakage upon unloading from the aircraft or into a unit load device.

(2) If evidence of damage or leakage is found, the operator of an aircraft, or any agent of the operator, shall inspect, for damage or contamination, the area where the munitions of war, dangerous goods or unit load device were stowed.

(3) The operator of any aircraft shall ensure that the aircraft is not permitted to fly for the purpose of carrying passengers or cargo if the operator knows or suspects that radioactive materials have leaked in or contaminated the aircraft, unless the radiation level resulting from the fixed contamination at any accessible surface and the non-fixed contamination are not more than the values specified in paragraph 3.2 of Part 7 of the Technical Instructions.

[S 21/2015 wef 26/01/2015]

## PART III

## SHIPPER'S RESPONSIBILITIES

1. Before consigning any munitions of war or dangerous goods for carriage by air, the shipper or his agent shall —

- (a) ensure that the munitions of war or dangerous goods are not forbidden for carriage by air in any circumstances under the provisions of the Technical Instructions;
- (b) ensure that the munitions of war or dangerous goods are properly classified, packed, marked, labelled and accompanied by a properly

NINETEENTH SCHEDULE — *continued*

- executed dangerous goods transport document, as specified in Annex 18 to the Chicago Convention and the Technical Instructions;
- (c) provide to the operator of the aircraft on which the munitions of war or dangerous goods are to be carried, or to any agent of the operator, the duly executed dangerous goods transport document, which shall contain the information required by the Technical Instructions;
  - (d) sign a declaration that the munitions of war or dangerous goods are fully and accurately described by their proper shipping names and that they are classified, packed, marked, labelled, and in proper condition for carriage by air in accordance with the Technical Instructions;
  - (e) provide to their employees such information as will enable them to carry out their responsibilities with regard to the carriage of munitions of war or dangerous goods and instructions as to the action to be taken in the event of emergencies arising involving munitions of war or dangerous goods; and
  - (f) ensure that the English language is used for all dangerous goods transport documents.

[S 729/2010 wef 01/12/2010]

PART IV  
TRAINING

1. [*Deleted by S 570/2011 wef 04/10/2011*]

2.—(1) The following persons shall establish and maintain initial and recurrent dangerous goods training programmes:

- (a) shippers of dangerous goods, including packers and persons or organisations undertaking the responsibilities of the shipper;
- (b) operators of aircraft;
- (c) ground handling agencies which perform, on behalf of the operator, the act of accepting, handling, loading, unloading, transferring or other processing of cargo, mail or stores;
- (d) ground handling agencies located at an airport which perform, on behalf of the operator, the act of processing passengers;
- (e) agencies, not located at an airport, which perform, on behalf of the operator, the act of checking in passengers; and

NINETEENTH SCHEDULE — *continued*

- (f) every public postal operator (within the meaning of paragraph 50DB).
- (1A) The persons referred to in sub-paragraph (1) shall —
- (a) ensure that the contents of the initial and recurrent dangerous goods training courses are in accordance with Tables 1-4, 1-5 and 1-6, as may be relevant, of the Technical Instructions; and
  - (b) maintain records of such training programmes as specified in paragraph 4.2 of the Technical Instructions.
- (2) The operator of a Singapore aircraft and every public postal operator (within the meaning of paragraph 50DB) shall submit the programme for initial and recurrent dangerous goods training it has established to the Chief Executive for approval, which may be granted subject to such conditions as the Chief Executive thinks fit.

[S 570/2011 wef 04/10/2011]

[S 351/2015 wef 02/06/2015]

## PART V

DOCUMENTS AND RECORDS, ENFORCEMENT POWERS AND  
GENERAL

- 1.—(1) The operator of any aircraft carrying munitions of war or dangerous goods as cargo shall ensure that a copy of the dangerous goods transport document required by paragraph 1(a) of Part II of this Schedule and the written information to the pilot-in-command required by paragraph 4(2) of Part II of this Schedule are retained at a readily accessible location until after the full period of the flight on which the munitions of war or dangerous goods were carried.
- (2) The operator of any aircraft on which munitions of war or dangerous goods are carried shall preserve for not less than 3 months —
- (a) any dangerous goods transport document or other document in respect of munitions of war or dangerous goods which has been furnished to him by the shipper in accordance with paragraph 1(a) of Part II of this Schedule;
  - (b) the record of any acceptance check list completed in accordance with paragraph 2 of Part II of this Schedule; and
  - (c) the written information to the pilot-in-command as required by paragraph 4(2) of Part II of this Schedule.

NINETEENTH SCHEDULE — *continued*

(3) The record referred to in sub-paragraph (2)(b) may be in a legible or a non-legible form so long as the recording is capable of being reproduced in a legible form.

2.—(1) The operator of any aircraft on which munitions of war or dangerous goods are to be or have been carried and any agent thereof shall, within a reasonable time after being requested so to do by an authorised person, cause to be produced to that person such of the following documents as may have been requested by that person:

- (a) the munitions of war permit granted under paragraph 50C(3), the dangerous goods permit granted under paragraph 50D(3) or the approval for transport of dangerous goods or other purposes granted under paragraph 50DA(3);
- (b) the dangerous goods transport document or other document in respect of any munitions of war or dangerous goods, referred to in paragraph 1(a) of Part II of this Schedule;
- (c) the completed acceptance check list in a legible form in respect of any munitions of war or dangerous goods, referred to in paragraph 2 of Part II of this Schedule; and
- (d) a copy of the written information provided to the pilot-in-command of the aircraft in respect of any dangerous goods, referred to in paragraph 4(2) of Part II of this Schedule.

(2) The aircraft operator or shipper, or any agent of either of them, shall, within a reasonable time after being requested so to do by an authorised person, cause to be produced to that person any document which relates to goods which the authorised person has reasonable grounds to suspect may be munitions of war or dangerous goods in respect of which the provisions of Part VB of this Order have not been complied with.

*[S 423/2010 wef 02/08/2010]*

*[S 124/2012 wef 02/04/2012]*

LEGISLATIVE HISTORY  
AIR NAVIGATION ORDER  
(CHAPTER 6, O 2)

This Legislative History is provided for the convenience of users of the Air Navigation Order. It is not part of this Order.

- 1. G. N. No. S 164/1985 — Air Navigation Order 1985**  
Date of commencement : 1 July 1985
- 2. G. N. No. S 406/1988 — Air Navigation (Amendment) Order 1988**  
(G.N. No. S 44/1988 —Corrigenda)  
Date of commencement : 1 January 1989
- 3. G. N. No. S 73/1989 — Air Navigation (Amendment) Order 1989**  
Date of commencement : 1 January 1989
- 4. G. N. No. S 476/1989 — Air Navigation (Amendment No. 2) Order 1989**  
Date of commencement : 1 January 1990
- 5. G. N. No. S 239/1990 — Air Navigation (Amendment) Order 1990**  
Date of commencement : 8 June 1990
- 6. G. N. No. S 436/1990 — Air Navigation (Amendment No. 2) Order 1990**  
Date of commencement : 1 February 1991
- 7. G. N. No. S 573/1991 — Air Navigation (Amendment) Order 1991**  
Date of commencement : 1 January 1992
- 8. G. N. No. S 49/1992 — Air Navigation (Amendment) Order 1992**  
(G.N. No. S 60/1992 — Corrigenda)  
Date of commencement : 1 February 1992
- 9. 1990 Revised Edition — Air Navigation Order**  
Date of operation : 25 March 1992
- 10. G. N. No. S 180/1992 — Air Navigation (Amendment No. 2) Order 1992**  
Date of commencement : 1 May 1992
- 11. G. N. No. S 61/1993 — Air Navigation (Amendment) Order 1993**  
Date of commencement : 19 March 1993
- 12. G. N. No. S 199/1993 — Air Navigation (Amendment No. 2) Order 1993**  
Date of commencement : 1 August 1993

- 13. G. N. No. S 8/1994 — Air Navigation (Amendment) Order 1994**  
Date of commencement : 15 January 1994
- 14. G. N. No. S 67/1998 — Air Navigation (Amendment) Order 1998**  
Date of commencement : 20 February 1998
- 15. G. N. No. S 325/2000 — Air Navigation (Amendment) Order 2000**  
Date of commencement : 1 August 2000
- 16. G. N. No. S 384/2000 — Air Navigation (Amendment No. 2) Order 2000**  
Date of commencement : 31 August 2000
- 17. G. N. No. S 166/2002 — Air Navigation (Amendment) Order 2002**  
Date of commencement : 15 April 2002
- 18. G. N. No. S 56/2003 — Air Navigation (Amendment) Order 2003**  
Date of commencement : 7 February 2003
- 19. G. N. No. S 440/2003 — Air Navigation (Amendment No. 2) Order 2003**  
Date of commencement : 15 September 2003
- 20. G. N. No. S 581/2003 — Air Navigation (Amendment No. 3) Order 2003**  
Date of commencement : 12 December 2003
- 21. G. N. No. S 331/2005 — Air Navigation (Amendment) Order 2005**  
Date of commencement : 2 June 2005
- 22. G. N. No. S 781/2005 — Air Navigation (Amendment No. 2) Order 2005**  
Date of commencement : 7 December 2005
- 23. G. N. No. S 487/2006 — Air Navigation (Amendment) Order 2006**  
Date of commencement : 11 August 2006
- 24. G. N. No. S 640/2006 — Air Navigation (Amendment No. 2) Order 2006**  
Date of commencement : 30 November 2006
- 25. G. N. No. S 299/2009 — Air Navigation (Amendment) Order 2009**  
Date of commencement : 30 June 2009
- 26. G. N. No. S 278/2010 — Air Navigation (Amendment) Order 2010**  
Date of commencement : 15 May 2010
- 27. G. N. No. S 423/2010 — Air Navigation (Amendment No. 2) Order 2010**  
Date of commencement : 2 August 2010

- 28. G. N. No. S 729/2010 — Air Navigation (Amendment No. 3) Order 2010**  
Date of commencement : 1 December 2010
- 29. G. N. No. S 162/2011 — Air Navigation (Amendment) Order 2011**  
Date of commencement : 1 April 2011
- 30. G.N. No. S 570/2011 — Air Navigation (Amendment No. 2) Order 2011**  
Date of commencement : 4 October 2011
- 31. G.N. No. S 124/2012 — Air Navigation (Amendment) Order 2012**  
Date of commencement : 2 April 2012
- 32. G.N. No. S 617/2012 — Air Navigation (Amendment No. 2) Order 2012**  
Date of commencement : 17 December 2012
- 33. G.N. No. S 348/2013 — Air Navigation (Amendment) Order 2013**  
Date of commencement : 17 June 2013
- 34. G.N. No. S 21/2015 — Air Navigation (Amendment) Order 2015**  
Date of commencement : 26 January 2015
- 35. G.N. No. S 351/2015 — Air Navigation (Amendment No. 2) Order 2015**  
Date of commencement : 2 June 2015
- 36. G.N. No. S 803/2015 — Air Navigation (Amendment No. 3) Order 2015**  
Date of commencement : 30 December 2015
- 37. G.N. No. S 181/2016 — Air Navigation (Amendment) Order 2016**  
Date of commencement : 1 May 2016
- 38. G.N. No. S 475/2016 — Air Navigation (Amendment No. 2) Order 2016**  
Date of commencement : 1 October 2016
- 39. G.N. No. S 589/2016 — Air Navigation (Amendment No. 3) Order 2016**  
Date of commencement : 18 November 2016
- 40. G.N. No. S 616/2017 — Air Navigation (Amendment) Order 2017**  
Date of commencement : 31 October 2017
- 41. G.N. No. S 683/2018 — Air Navigation (Amendment) Order 2018**  
Date of commencement : 9 October 2018
- 42. G.N. No. S 178/2019 — Air Navigation (Amendment) Order 2019**  
Date of commencement : 31 March 2019



**43. G.N. No. S 497/2019 — Air Navigation (Amendment No. 2) Order 2019**

Date of commencement : 15 July 2019

**44. G.N. No. S 497/2019 — Air Navigation (Amendment No. 2) Order 2019**

Date of commencement : 1 August 2019