GOVERNMENT GAZETTE

OF THE

REPUBLIC OF NAMIBIA

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General Notice

MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

No. 247 1997

PROPOSED CIVIL AVIATION REGULATIONS :

PART 121 - CERTIFICATED AIRCRAFT OPERATORS AND OTHER FLIGHT OPERATIONS : AIR TRANSPORT OPERATIONS - LARGE AEROPLANES

The Ministry of Works, Transport and Communication recently initiated the project to update the current Namibian aviation legislation. There are two main reasons for updating the aviation legislation, namely, the current legislation does not adequately reflect the policies of Namibia for the aviation sector and does not reflect recent

developments within SADC. The project further aims to enhance the safety of civil aviation by ensuring that the Namibian legislation complies with the minimum standards prescribed by the International Civil Aviation Organization.

Part of the short-term legislative reform involves the updating of the regulations made under the Aviation Act, 1962 (Act 74 of 1962).

Due to the nature and extensive range of subjects which need to be regulated, this part of the project will be executed in phases and regulations will be published accordingly. The proposed structure of the Civil Aviation Regulations is set out in Schedule 1.

All the definitions for the proposed civil aviation regulations will be contained and published in Part 1. The definitions for each Part will however be published with each set of proposed regulations, to facilitate the interpretation thereof. The definitions associated with the proposed regulations on air transport operations - large aeroplanes are set out in Schedule 2.

The Director : Civil Aviation invites all interested parties to comment on the proposed structure of the Civil Aviation Regulations, the proposed definitions associated with the proposed regulations, as well as the proposed regulations on Air Transport Operations - Large Aeroplanes set out in Schedule 3. The proposed regulations represent Part 121 of the proposed structure.

The proposed regulations on Air Transport Operations - Large Aeroplanes make provision for certain information to be contained in a document called Document NA-CATS-OPS 121. The compilation of the document does not form part of this project, but it is envisaged as a document that will contain all the technical standards regarding air transport operations - large aeroplanes.

Comments or representations should be lodged in writing and should reach the Ministry not later than **90 days** from the date of publication of this notice. Correspondence should be addressed to:

The Director : Civil Aviation

Ministry of Works, Transport and Communication

Department of Transport

Private Bag 12003

WINDHOEK

Attention	:	Mr Louis Lourens
Telephone	:	208-2159
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Upon expiry of the aforementioned 90 day period, all comments which have been received will be evaluated for possible incorporation into the proposed regulations on Air Transport Operations - Large Aeroplanes and if necessary, a workshop will be held to finalise the proposed regulations.

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NAMIBIAN CIVIL AVIATION REGULATIONS STRUCTURE

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Definitions

In these regulations, unless the context otherwise indicates -

"accelerate-stop distance available" means the length of the take-off run available plus the length of stopway, if such stopway is declared available by the appropriate Authority and is capable of bearing the mass of the aeroplane under the prevailing operating conditions;

"acts of unlawful interference" means sabotage, unlawful seizure of aircraft or any other act by a person which endangers other persons, property or the aircraft;

"additional cabin crew member" means a cabin crew member carried over and above the minimum number required by Subpart 2 of Part 91;

"additional flight deck crew member" means a flight crew member carried over and above the minimum number required by Subpart 2 of Part 91;

"aerodrome" means an aerodrome as defined in the Act, and for the purposes of Part 91 includes a heliport;

"aerodrome operating minima" means the limits of usability of an aerodrome for either take-off or landing, usually expressed in terms of visibility or runway visual range, decision altitude/height or minimum descent altitude/height and cloud conditions;

"air traffic service flight plan" means specified information, relating to the

intended flight of an aircraft, which is filed orally or in writing with an air traffic control unit;

"airworthy" means, when used in relation to an aircraft, that the aircraft is serviceable and meets all the requirements prescribed for the issue of a certificate of airworthiness and such other requirements as have been prescribed for the continuing validity of such a certificate;

"aisle" means a longitudinal passageway between seats;

"all weather operations" means any take-off, en-route or landing operations in IMC and operated in accordance with IFR;

"alternate aerodrome for take-off" means an aerodrome to which a flight may proceed should the weather conditions at the aerodrome of departure preclude a return for landing;

"alternate aerodrome for landing" means an aerodrome specified in the flight plan to which a flight may proceed when it becomes inadvisable to land at the aerodrome of intended landing;

"amphibious aeroplane" means an aeroplane designed and constructed to take-off and land from land surfaces as well as water surfaces;

"appropriate authority" -

(a) means any institution, body or person in a State or territory which, on behalf of that State or territory carries out the provisions of the Convention; or

(b) if such Convention does not apply to a State or territory, means the institution, body or person in that State or territory which on behalf of the State or territory, performs the functions which are performed by an institution, body or person contemplated in paragraph (a),

and which is recognised as such by the Commissioner;

"cabin crew member" means a flight crew member, other than a flight deck crew member, licensed in terms of these regulations;

"child" means a passenger who has reached his or her second but not his or her twelfth birthday;

"cloud ceiling" means the height above the ground or water of the base of the lowest layer of cloud situated below 20 000 feet and covering more than half the sky;

"commercial air transport operation" means an air service as defined in the Air Services Act, 1949 (Act 51 of 1949);

"contaminated runway" means a runway of which more than 25% of the runway surface area within the required length and width being used is covered with -

(a) surface water more than three millimetres deep;

(b) slush and loose snow, equivalent to more than three millimetres of water;

(c) snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if

picked up; or

(d) ice, including wet ice;

"critical phases of flight" shall include all ground operations involving taxi, take-off, climb to cruise up to 10 000 feet and approach from cruise below 10 000 feet;

"damp runway" means a runway of which the surface is not dry and on which the moisture does not give the runway a shiny appearance;

"day" means the period between the end of morning civil twilight and the beginning of evening civil twilight;

"decision altitude/height" means a specified altitude or height in a precision approach at which a missed approach shall be initiated if the required visual reference to continue the approach has not been established;

"Document NA-CATS-OPS 121" means a document on the Namibian Civil Aviation Technical Standards relating to commercial operation of large aeroplanes which is published by the Director in terms of the Act;

"dry lease" means the lease of an aircraft to the lessee in terms of which the aircraft is operated under the operating certificate of the lessee;

"dry operating mass" means the total mass of the aircraft ready for a specific type of operation, excluding all usable fuel and traffic load, and including -

(a) crew members and crew member baggage;

(b) catering and removable passenger service equipment; and

(c) potable water and lavatory chemicals;

"dry runway" means a dry runway which is neither wet nor contaminated, and includes those paved runways which have been specially prepared with grooves or porous pavement and maintained to retain "effectively dry" braking action even when moisture is present;

"en-route safe altitude" means an altitude which will ensure a separation height of at least 1 500 feet above the highest obstacle located within five nautical miles of the aircraft in flight;

"extended range operations" means flights conducted over a route that contain a point further than one hour flying time at the approved one-engine inoperative cruise speed, under standard conditions in still air, from an adequate aerodrome;

"extended range operations with twin engine aircraft" means flights conducted with a twin engine aircraft, over a route that contain a point further than one hour flying time at the approved one-engine inoperative cruise speed, under standard conditions in still air, from an adequate aerodrome;

"flight visibility" means the visibility forward from the cockpit of an aircraft in flight;

"final approach fix" means the fix from which the final approach (IFR) to an aerodrome is executed and which identifies the beginning of the final approach segment;

"handicapped passenger" means a passenger who is physically or mentally handicapped due to illness, injury, congenital malfunction or other temporary or permanent incapacity or disability;

"infant" means a passenger who has not reached his or her second birthday;

"initial approach fix" means the fix depicted on Instrument Approach Procedure Charts that identifies the beginning of the initial approach segment;

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

"International Regulations for Preventing Collisions at Sea" means the International Regulations for Preventing Collisions at Sea made under the Convention on the International Regulations for Preventing Collisions at Sea;

"landing distance available" means the length of the runway which is declared available by the appropriate authority and suitable for the ground run of an aeroplane landing;

"low visibility procedures" means procedures applied at an aerodrome for the purpose of ensuring safe operations during Category II and Category III approaches and low visibility take-offs;

"low visibility take-off" means a take-off where the runway visual range is less

than 400 metres;

"Mach number" means the ratio of true airspeed to the speed of sound;

"master minimum equipment list" means a list compiled for a particular aircraft type by the manufacturer of the aircraft with the approval of the State of Manufacture containing items, one or more of which is permitted to be unserviceable at the commencement of a flight;

"maximum approved passenger seating configuration" means the maximum passenger seating capacity of an aircraft, excluding pilot seats, cockpit seats or flight deck seats as applicable, used by the operator in a commercial air transport operation, approved by the Director and specified in the operations manual referred to in regulations 121.04.2, 127.04.2 or 135.04.2;

"maximum certificated mass" means the maximum permissible mass shown in the aircraft flight manual or other document associated with the certificate of airworthiness at which an aircraft may commence its take-off under standard atmospheric conditions at sea-level;

"minimum descent altitude/height" means a specified altitude or height in a non-precision approach or circling approach below which descent may not be made without visual references for the intended runway or touch-down area;

"missed approach point" means that point, in an instrument approach procedure at or before which the prescribed missed approach procedure shall be initiated, in order to ensure that the minimum obstacle clearance is not infringed;

"missed approach procedure" means the procedure to be followed if the approach

cannot be continued;

"night" means the period between the end of evening civil twilight and the beginning of morning civil twilight;

"operating certificate" means an operating certificate issued by the Director authorising an operator of a commercial air transport aeroplane to carry out specified air transport operations;

"operational flight plan" means the operator's plan for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned;

"operations personnel", for the purposes of Part 138, means personnel assigned to or directly involved in ground and flight emergency medical service operations;

"owner" means an owner as defined in the Act, and for the purposes of Part 91 includes an operator of an aircraft engaged in non-commercial operations;

"precision approach" means an Instrument Approach for landing in which precision azimuth guidance and precision glide path guidance are provided in accordance with the minima prescribed for the category of operation;

"runway visual range" means the runway visual range over which the pilot of an aeroplane on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line;

"seaplane" means an aeroplane designed and constructed to take off from and

land on water surfaces only;

"sector" includes take-off, en-route flight time but excludes circuit operations and landing operations;

"simulator" means -

(a) a flight procedures trainer or synthetic flight training device; or

(b) a type specific flight simulator,

approved by the Director for a specific purpose;

"State of Registry" means the State on whose register an aircraft is entered;

"take-off distance available" means -

(a) in the case of an aeroplane, the length of the take-off run available plus the length of the clearway available; or

(b) in the case of a helicopter, the distance from the point of lift-off to the nearest obstacle in the take-off path, of 50 feet or higher;

"take-off mass" means the mass of the aircraft, including everything and every person carried in the aircraft at the commencement of the take-off run or lift-off, as the case may be;

"take-off run available" means the length of runway which is declared available by the appropriate authority and suitable for the ground run of an aeroplane taking off;

"total cosmic radiation" means the total of ionizing and neutron radiation of galactic and solar origin;

"traffic load" means the total mass of passengers, baggage and cargo, including any non-revenue load;

"visibility" means the ability, as determined by atmospheric conditions and expressed in units of measurement, to see and identify prominent unlighted objects by day and prominent lighted objects by night;

"visual approach" means an approach when either part or all of an instrument approach procedure is not completed and the approach is executed with visual reference to the terrain;

"wet lease" means the lease of an aircraft to the lessee in terms of which the aircraft is operated under the operating certificate of the lessor;

"wet runway" means a runway of which less than 25% of the surface is covered with water, slush or loose snow or when there is sufficient moisture on the runway surface to cause it to appear reflective, but without significant areas of standing water.

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SUBPART 1

GENERAL

Applicability

121.01.1 (1) This Part shall apply to -

(a) aeroplanes with a maximum certificated mass exceeding 5 700 kilograms, or a maximum approved passenger seating configuration of more than nine seats, engaged in commercial air transport operations within Namibia;

(b) aeroplanes with a maximum certificated mass exceeding 5 700 kilograms, or a maximum approved passenger seating configuration of more than nine seats, registered in Namibia and engaged in commercial international air transport operations;

(c) persons acting as crew members of aeroplanes registered in Namibia; and

(d) persons who are on board an aeroplane operated under this Part.

(2) For the purposes of this Part, an aeroplane registered in another State and operated by the holder of an operating certificate issued in Namibia, shall be deemed to be registered in Namibia.

(3) The provisions of Part 91 shall *mutatis mutandis* apply to any

aeroplane operated in terms of this Part.

Exemptions

121.01.2 (1) The Director may exempt any aeroplane or person involved in emergency operations from the provisions of this Part, on the conditions as prescribed in Document NA-CATS-OPS 121.

(2) An application for an exemption shall be made in accordance with the provisions of Part 11.

Admission to flight deck

121.01.3 (1) The operator of a large commercial air transport aeroplane shall ensure that no person, other than the flight deck crew members assigned to a flight, is admitted to, or carried on the flight deck of the aeroplane unless such person is -

(a) a flight crew member assigned to the flight;

(b) an authorised officer, inspector or authorised person; or

(c) permitted by, and carried in accordance with, the instructions contained in the operations manual referred to in regulation 121.04.2.

(2) The final decision regarding the admission of any person to the flight deck shall be the responsibility of the pilot-in-command.

(3) The admission of any person to the flight deck shall not interfere

with the operation of the aeroplane.

(4) Any person carried on the flight deck shall be made familiar with the applicable procedures.

Drunkenness

121.01.4 (1) The operator of a large commercial air transport aeroplane shall not permit, and no person shall enter or be in, the aeroplane while under the influence of alcohol or a drug having a narcotic effect, to the extent where the safety of such aeroplane or its occupants is, or is likely to be, endangered.

(2) The operator shall establish procedures to ensure that any person referred to in subregulation (1) is -

(a) refused embarkation; or

(b) if such person is on board, restrained or disembarked.

Dry lease-in of large commercial air transport aeroplane

121.01.5 (1) An operator who intends to dry lease-in a large foreign registered aeroplane for commercial air transport purposes, shall -

(a) ensure that such aeroplane can be operated and is operated in accordance with the requirements prescribed in this Part;

(b) obtain prior approval from the Director to operate such aeroplane.

(2) The approval referred to in subregulation (1)(b) shall, subject to such conditions as the Director may determine, be granted if such aeroplane is -

(a) type certificated in accordance with the requirements prescribed in Part 21;

(b) maintained in accordance with an aeroplane maintenance schedule referred to in regulation 121.09.2;

(c) operated under the operating certificate held by the operator referred to in subregulation (1).

(3) The conditions of approval referred to in subregulation (2) shall be part of the lease agreement between the operator referred to in subregulation (1) and the operator from which the large foreign registered aeroplane is leased.

Wet lease-in of large commercial air transport aeroplane

121.01.6 (1) An operator who intends to wet lease-in a large foreign registered aeroplane for commercial air transport purposes, shall, subject to such conditions as the Director may determine, obtain prior approval from the Director to operate such aeroplane.

(2) The duration of the lease agreement concerned shall be limited to a maximum period of six calendar months in one year.

(3) The approval referred to in subregulation (1) shall, subject to such conditions as the Director may determine, be granted if such aeroplane -

(a) is wet-leased-in from an operator who is the holder of an operating certificate issued by an appropriate authority;

(b) has been type certificated by the appropriate authority;

(c) holds a valid certificate of airworthiness or similar document issued by such appropriate authority;

(d) is maintained and operated in accordance with safety standards at least equivalent to the safety standards referred to in this Part; and

(e) will be operated in terms of the operating certificate held by the operator referred to in subregulation (1).

(4) The operator referred to in subregulation (1) shall -

(a) satisfy the Director that the safety standards of the lessor are not less than the safety standards referred to in this Part;

(b) ensure that any law applicable to the aeroplane to be wet leased-in, the maintenance or operation thereof, is complied with.

(5) The total number of wet-leased-in aeroplanes shall be such that an operator referred to in subregulation (1) will not be predominantly dependent on foreign registered aeroplanes.

(6) The conditions of approval referred to in subregulation (1) shall be part of the lease agreement between the operator referred to in subregulation (1) and the operator from which the large foreign registered aeroplane is leased.

Dry lease-out of large commercial air transport aeroplane

121.01.7 (1) Subject to the provisions of subregulation (2), the operator of a large Namibian registered aeroplane may dry lease-out the aeroplane to any operator in a contracting State.

(2) On request of the operator of a large Namibian registered aeroplane, the Director may exempt such operator from the applicable provisions of this Part and remove the aeroplane from the operating certificate held by such operator: Provided that -

(a) the appropriate authority of the State of the operator to whom such aeroplane is dry leased has accepted, in writing, responsibility for surveillance of the maintenance and operation of such aeroplane; and

(b) such aeroplane is maintained according to an approved maintenance programme.

Wet lease-out of large commercial air transport aeroplane

121.01.8 The operator of a large Namibian registered aeroplane who intends to wet lease-out the aeroplane to any operator, other than an operator of a contracting State, shall remain the operator of the aeroplane for the purposes of Subpart 6, and responsibility for surveillance of the maintenance and operation of such aeroplane

shall not be transferred to the appropriate authority of the State of the operator to which such aeroplane is wet leased-out.

Leasing of large commercial air transport aeroplane between two Namibian operators

121.01.9 (1) A Namibian operator who intends to lease out an aeroplane and complete crew to another Namibian operator, shall remain the operator of the aeroplane and shall retain the functions and responsibilities prescribed in Subpart 6.

(2) A Namibian operator, intending to utilise an aeroplane leased from, or to lease it to, another Namibian operator shall obtain prior approval from the Director for the operation, and the conditions of approval shall be part of the lease agreement between the operators.

(3) The terms of an approved lease agreement, other than an agreement in terms of which an aeroplane together with aeroplane crew is leased, and where no transfer of functions and responsibilities is intended, shall include -

(a) the arrangement concerning the operating certificate under which the flights with the leased aeroplane shall be operated; and

(b) any deviation from the operating certificate under which the flights with the leased aeroplane shall be operated.

Subchartering

121.01.10 (1) In the exceptional circumstances as prescribed in Document

NA-CATS-OPS 121, an operator may subcharter a large aeroplane and crew from any operator who holds a valid operating certificate for the aeroplane, issued by an appropriate authority: Provided that -

(a) the subcharter period does not exceed five consecutive days; and

(b) the operator of the aeroplane so subchartered, informs the Director, within 24 hours, of such subcharter.

(2) The provisions of regulations 121.01.5(1)(a) and (2), 121.01.6(3) and (4)(b) and 121.01.9(1) and (3) shall apply *mutatis mutandis* to any subcharter referred to in this regulation.

Preservation of documents

121.01.11 The operator of a large commercial air transport aeroplane who is required to retain any of the documents for the specified period referred to in Subpart 4, shall retain such documents for such specified period irrespective of the fact that such operator, before the expiry of such specified period, ceases to be the owner or possessor of the aeroplane concerned.

SUBPART 2

FLIGHT CREW

Composition of flight crew

121.02.1 (1) The minimum number and composition of the flight crew shall not be less than the minimum number and composition specified in the aeroplane flight manual referred to in regulation 121.04.4.

(2) The operator of a large commercial air transport aeroplane shall allocate additional flight crew members when it is required by the type of operation, and the number of such additional flight crew members shall not be less than the number specified in the operations manual referred to in regulation 121.04.2.

(3) The operator shall ensure that the flight crew members -

(a) are competent to perform the duties assigned to them; and

(b) hold the appropriate valid licences and ratings.

(4) The flight crew shall include at least one member who holds a valid radiotelephony operator licence or an equivalent document issued by an appropriate authority, authorising such member to operate the type of radio transmitting equipment to be used.

(5) When deemed necessary for the safe conduct of a flight, the flight crew shall include at least one member who is proficient in navigating over the route to be flown.

(6) For operations under IFR or at night in a large commercial air transport aeroplane, the operator shall ensure that the minimum flight crew is two pilots.

(7) The operator shall designate one pilot among the flight crew as pilot-in-command of a large commercial air transport aeroplane and the pilot-in-command may delegate the conduct of the flight to another suitably qualified pilot.

In-flight relief of crew members

121.02.2 (1) The operator of a large commercial air transport aeroplane shall establish procedures in accordance with the provisions of this regulation, to prevent inexperienced flight crew members from doing duty together on the same flight.

(2) A flight deck crew member may be relieved in flight of his or her duties at the controls of a large commercial air transport aeroplane by another suitably qualified flight deck crew member.

(3) A pilot assigned to the pilot-in-command station may be relieved by another pilot who -

(a) is the holder of the appropriate valid pilot licence (aeroplane) and ratings;

(b) has completed -

(i) the conversion training and checking, including type rating training, prescribed in Subpart 3;

(ii) the recurrent training and checking prescribed in Subpart 3; and

(iii) in the case of scheduled public air transport operations, recency, route and aerodrome qualifications prescribed in regulation 121.02.4; and

(c) may not operate below FL 200 unless he or she is the holder of the applicable type rating and has been assigned to the pilot-in-command station.

(4) The co-pilot of a large commercial air transport aeroplane may be relieved by -

(a) another suitably qualified pilot; or

(b) a cruise relief co-pilot who holds a valid commercial pilot licence (aeroplane) and instrument rating and who has completed -

(i) the conversion training and checking, including type rating training other than take-off and landing training, prescribed in Subpart 3;

(ii) the recurrent training and checking, other than take-off and landing training, prescribed in Subpart 3.

(5) A cruise relief co-pilot referred to in subregulation (4) shall -

(a) not operate as co-pilot below FL 200; and

(b) shall carry out simulator recency and refresher flying skill training at intervals not exceeding six months.

(6) A flight engineer may be relieved in flight by a flight crew member who holds a valid flight engineer licence or by a suitably qualified flight crew member.

(7) When any additional crew member is carried to provide in-flight relief for the purpose of extending a flight time and duty period, such crew member shall hold qualifications which comply with the requirements of the operational duty which he or she is required to carry out during such in-flight relief period.

Crew member emergency duties

121.02.3 (1) The operator and, where appropriate, the pilot-in-command of a large commercial air transport aeroplane shall assign to each crew member concerned, the necessary functions to be performed in an emergency or a situation requiring emergency evacuation.

(2) The functions referred to in subregulation (1) shall be such as to ensure that any reasonably anticipated emergency can be adequately dealt with and shall take into consideration the possible incapacitation of individual crew members.

(3) The operator shall prove to the satisfaction of the Director that the crew members are competent to perform such functions, by means of an emergency

evacuation demonstration carried out in accordance with the requirements prescribed in Document NA-CATS-OPS 121.

(4) The operator shall carry out an emergency evacuation demonstration referred to in subregulation (3) when a new type or variant of aeroplane or new configuration of an existing aeroplane is introduced for use.

(5) A crew member shall not accept an assignment of emergency functions unless such crew member has been trained to perform emergency functions in accordance with the requirements prescribed in Subpart 3.

Recency, route and aerodrome qualifications

121.02.4 (1) A pilot shall not act as pilot-in-command of a large commercial air transport aeroplane operated on a scheduled public air transport service, unless the pilot has within the preceding 12 months demonstrated to the operator of such aeroplane an adequate knowledge of -

(a) the route to be flown;

(b) the aerodromes to be used;

(c) the procedures applicable to flight paths over heavily populated areas and areas of higher traffic density; and

(d) obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures including operating minima.

(2) If a route requires a specific type of navigation qualification, the pilot-in-command shall within the 12 months immediately preceding a flight on such route, demonstrate his or her ability to the operator of the large commercial air transport aeroplane by -

(a) flying over a route or area as pilot-in-command using the applicable special type of navigation system; or

(b) flying over a route or area under the supervision of a suitably qualified pilot using the applicable special type of navigation system.

Cabin crew member complement

121.02.5 (1) If the certificate of airworthiness of a large commercial air transport aeroplane requires the carrying of one or more cabin crew members, the operator of the aeroplane shall not, when carrying one or more passengers, operate such aeroplane without carrying the minimum number of cabin crew as prescribed in Document NA-CATS-OPS 121.

(2) Cabin crew members are carried for the purposes of performing duties relating to the safety of passengers and other duties assigned by the operator or the pilot-in-command.

(3) In unforeseen circumstances, the operator may reduce the required minimum number of cabin crew members: Provided that -

(a) the number of passengers has been reduced in accordance with the procedures specified in the operations manual

referred to in regulation 121.04.2; and

(b) a report is submitted to the Director after completion of the flight.

Operation on more than one type or variant by cabin crew member

121.02.6 (1) A cabin crew member shall not operate on more than three aeroplane types: Provided that the Director may approve the operation on four aeroplane types if the emergency and safety equipment and procedures for at least two of the aeroplane types are similar.

(2) The types of aeroplanes which are deemed to be similar in respect of emergency and safety equipment and procedures shall be listed in Document NA-CATS-OPS 121.

Senior cabin crew member

121.02.7 (1) The operator of a large commercial air transport aeroplane shall appoint a senior cabin crew member whenever more than one cabin crew member is carried on board a large commercial air transport aeroplane.

(2) The senior cabin crew member shall be responsible to the pilot-in-command for the conduct of cabin operations and the co-ordination and performance of safety duties.

(3) The operator shall establish procedures to select the next most suitably qualified cabin crew member to operate as senior cabin crew member in the event of the nominated senior cabin crew member being unable to operate.

Cabin crew member emergency evacuation stations

121.02.8 A cabin crew member assigned to perform evacuation duties in a large commercial air transport aeroplane shall occupy the seat provided therefor during take-off and landing or when so directed by the pilot-in-command for safety purposes.

Seating of cabin crew members during flight

121.02.9 During take-off and landing, and whenever deemed necessary by the pilot-in-command in the interest of safety, cabin crew members shall be seated at their assigned station or seat, on all decks which are occupied by passengers.

Flight time and duty periods

121.02.10 (1) The operator of a large commercial air transport aeroplane shall -

(a) establish a scheme for the regulation of flight time and duty periods for each crew member; and

(b) include the scheme referred to in paragraph (a) in the operations manual referred to in regulation 121.04.2.

(c) ensure that each crew member complies with the provisions of the scheme referred to in paragraph (a);

(d) not cause or permit any crew member to fly in the aeroplane if such operator knows or has been made aware that such crew member -

(i) will exceed the flight time and duty periods prescribed in subregulation (1)(a) while on flight duty; or

(ii) is suffering from or, having regard to the circumstances of the flight to be undertaken, is likely to suffer from fatigue which may endanger the safety of the aeroplane or its crew members and passengers; and

(e) not schedule a crew member for active flight duty for a period exceeding eight consecutive hours during any given flight time and duty period unless authorised in the scheme referred to in paragraph (a).

(2) Except with the approval of the Director, the flight and duty scheme of the operator shall not be in conflict with the provisions of regulation 91.02.3(1)(f).

(3) The provisions to be included in a flight and duty scheme referred to in subregulation (1) shall be as prescribed in Document NA-CATS-OPS 121.

SUBPART 3

TRAINING AND CHECKING

DIVISION ONE : GENERAL PROVISIONS

Training of crew members

121.03.1 (1) The operator of a large commercial air transport aeroplane shall establish and maintain a ground and flight training programme for crew members in his or her employ.

(2) The operator shall ensure that -

(a) each crew member receives training in accordance with this Subpart and the appropriate syllabus as prescribed in Document NA-CATS-OPS 121;

(b) the training shall only be provided by the holder of an aviation training organisation approval issued in terms of Part 141; and

(c) each crew member passes a written examination with regard to all the subjects of the training syllabi referred to in paragraph (a).

(3) The provisions of this Subpart shall apply in respect of full-time and part-time employed flight crew members.

Initial training of crew members

121.03.2 A crew member employed by the operator of a large commercial air transport aeroplane shall have successfully completed the initial training and skill tests as prescribed in Part 61, 63 or 64, as the case may be.

DIVISION TWO : PILOT AND FLIGHT ENGINEER TRAINING

Conversion training

121.03.3 (1) The operator of a large commercial air transport aeroplane shall ensure that -

(a) a flight deck crew member completes a type conversion course in accordance with the applicable requirements prescribed in Part 61 or 63, as the case may be, when changing from one type of aeroplane to another type or class for which a new type or class rating is required;

(b) a flight deck crew member completes the operator's type conversion course before commencing unsupervised line flying -

(i) when changing to an aeroplane for which a new type or class rating is required; or

(ii) when employed by such operator;

(c) type conversion training is conducted by a competent person in accordance with the detailed course syllabus included in the operations manual referred to in regulation 121.04.2, and as prescribed in Document NA-CATS-OPS 121;

(d) the amount of training required by the operator's type

conversion course is determined after due note has been taken of the flight deck crew member's previous training as recorded in the training records referred to in regulation 121.04.8;

(e) the minimum standards of qualification and experience required of flight deck crew members before undertaking type conversion training are specified in the operations manual referred to in regulation 121.04.2;

(f) each flight deck crew member undergoes the checks prescribed in regulation 121.03.6(2) and the training and checks prescribed in regulation 121.03.6(6) before commencing line flying under supervision;

(g) upon completion of line flying under supervision, the check prescribed in regulation 121.03.6(4) is undertaken; and

(h) crew resource management training as prescribed in Document NA-CATS-OPS 121 is incorporated in the conversion course.

(2) In the case of changing aeroplane type or class, the check prescribed in regulation 121.03.6(2) may be combined with the type or class rating skill test prescribed in Part 61 or 63, as the case may be.

(3) The operator's type conversion course and the type or class rating course prescribed in Part 61 or 63, as the case may be, may be combined.

(4) The operator's type conversion course shall include the items, and shall be conducted in the order, as prescribed in Document NA-CATS-OPS 121.

(5) When a flight deck crew member has not previously completed the operator's type conversion course, such operator shall ensure that, in addition to subregulation (4), the flight crew member undergoes general first aid training and, if applicable, ditching procedures training using the appropriate equipment in water.

Differences training and familiarisation training

121.03.4 (1) The operator of a large commercial air transport aeroplane shall ensure that a flight deck crew member completes differences training when -

(a) operating another variant of an aeroplane of the same type or another type of the same class currently operated; or

(b) a change of equipment or procedures on types or variants currently operated, requires the acquisition of additional knowledge.

(2) The operator shall ensure that a flight deck crew member completes familiarisation training when -

(a) operating another aeroplane of the same type or variant; or

(b) a change of equipment or procedures on types or variants currently operated, requires the acquisition of additional knowledge.

(3) The operator shall specify in the operations manual referred to in regulation 121.04.2 when differences training or familiarisation training is required.

Upgrading to pilot-in-command

121.03.5 (1) The operator of a large commercial air transport aeroplane shall ensure that, for an upgrade to pilot-in-command from co-pilot, and for a pilot joining as pilot-in-command -

(a) a minimum level of experience is specified in the operations manual referred to in regulation 121.04.2; and

(b) the co-pilot or pilot, as the case may be, completes an appropriate command course.

(2) The command course referred to in subregulation (1)(b) shall be specified in the operations manual referred to in regulation 121.04.2, and shall include -

(a) training in a flight simulator, including line orientated flying training, or flying training in the aeroplane;

(b) an operator proficiency check operating as pilot-in-command;

(c) pilot-in-command responsibilities;

(d) line training in command under supervision: Provided that a minimum of 10 sectors is required for pilots already qualified on the aeroplane type;

(e) completion of a pilot-in-command line check prescribed in regulation 121.03.6(4) and the recency, route and aerodrome qualifications prescribed in regulation 121.02.4; and

(f) crew resource management training as prescribed in Document NA-CATS-OPS 121.

Recurrent training and checking

121.03.6 (1) The operator of a large commercial air transport aeroplane shall ensure that -

(a) each flight deck crew member undergoes recurrent training and checking and that all such training and checking is relevant to the type or variant of aeroplane on which the flight deck crew member is licensed to operate;

(b) a recurrent training and checking programme is included in the operations manual referred to in regulation 121.04.2;

(c) recurrent training is conducted by -

(i) a competent person, in the case of ground and refresher training;

(ii) a type-rated instructor, in the case of aeroplane or

flight simulator training;

(iii) competent personnel in the case of emergency and safety equipment training and checking; or

(iv) competent personnel, in the case of crew resource management training;

(d) recurrent checking is conducted by -

(i) an examiner in the case of operator proficiency checks; and

(ii) a pilot-in-command designated by the operator in the case of line checks; and

(e) each flight crew member undergoes operator proficiency checks every six calendar months as part of a normal flight crew complement.

(2) The operator shall ensure that, in the case of the operator proficiency check referred to in subregulation (1)(a) -

(a) each flight deck crew member undergoes such checks to demonstrate his or her competence in carrying out normal, abnormal and emergency procedures; and

(b) such check is conducted without external visual reference when the flight deck crew member will be required to operate under IFR.

(3) Upon successful completion of the operator proficiency check referred to in subregulation (1)(e), the operator shall issue a certificate of competency to the flight crew member concerned, which certificate shall be valid for a period of six calendar months calculated from the last day of the calender month in which such certificate is issued.

(4) The operator shall ensure that, in the case of a line check, each flight deck crew member undergoes the line check on the aeroplane to demonstrate his or her competence in carrying out normal line operations specified in the operations manual referred to in regulation 121.04.2.

(5) Upon successful completion of the line check referred to in subregulation (4), the operator shall issue a certificate of competency to the flight crew member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

(6) The operator shall ensure that, in the case of emergency and safety equipment training and checking, each flight crew member undergoes training and checking on the location and use of all emergency and safety equipment carried.

(7) Upon successful completion of the emergency and safety equipment check referred to in subregulation 6, the operator shall issue a certificate of competency to the flight crew member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

(8) The operator shall ensure that, in the case of crew resource management training, each flight deck crew member undergoes such training as part

of the recurrent training as prescribed in Document NA-CATS-OPS 121.

(9) The operator shall ensure that, in the case of ground and refresher training, each flight crew member undergoes such training every 12 calendar months.

Pilot qualification to operate in either pilot's seat

121.03.7 The operator of a large commercial air transport aeroplane shall ensure that -

(a) a pilot to be assigned to operate in either pilot's seat, completes the appropriate training and checking; and

(b) the training and checking programme is -

(i) specified in the operations manual referred to in regulation 121.04.2; and

(ii) is undertaken in accordance with the appropriate syllabus as prescribed in Document NA-CATS-OPS 121.

Advanced qualification programme

121.03.8 (1) The period of validity for the training referred to in regulation 121.03.6 may be extended if the Director has approved an advanced qualification programme established by the operator.

(2) The advanced qualification programme shall contain training and checking which establishes and maintains a proficiency that is not less than the proficiency referred to in regulations 121.03.3(4), 121.03.4, 121.03.5 and 121.03.6.

DIVISION THREE : TRAINING OF CABIN CREW MEMBERS

Initial training

121.03.9 The operator of a large commercial air transport aeroplane shall ensure that each cabin crew member successfully completes the initial training prescribed in Part 64 before undertaking aeroplane type and differences training.

Type and differences training

121.03.10 (1) The operator of a large commercial air transport aeroplane shall ensure that each cabin crew member has completed the type training or differences training, specified in the operations manual referred to in regulation 121.04.2, before undertaking duties assigned to them.

(2) A cabin crew member shall complete a type training course when -

(a) employed by the operator as a cabin crew member; or

(b) assigned to act as a cabin crew member on another aeroplane type.

(3) A cabin crew member shall complete a differences training course when acting as a cabin crew member -

(a) in a variant of the current aeroplane type; or

(b) in aeroplane type with equipment, equipment location,

or safety procedures which differ from the current aeroplane type or variant.

(4) The operator shall determine the content of the type or differences training course taking account of the cabin crew member's previous training as recorded in the cabin crew member's training records prescribed in regulation 121.04.8.

(5) The operator shall ensure that -

(a) type training is conducted in a structured manner, in accordance with the requirements as prescribed in Document NA-CATS-OPS 121;

(b) differences training is conducted in a structured manner; and

(c) type training and differences training, includes the use of all emergency and survival equipment and all emergency procedures applicable to the aeroplane type or variant and involves training and practice on either a representative training device or on the actual aeroplane.

Familiarisation flights

121.03.11 The operator of a large commercial air transport aeroplane shall ensure that upon completion of type training or differences training, each cabin crew member undertakes familiarisation flights before acting as one of the minimum number of cabin crew prescribed in regulation 121.02.5.

Recurrent training

121.03.12 (1) The operator of a large commercial air transport aeroplane shall ensure that each cabin crew member undergoes recurrent training, covering the actions assigned to each cabin crew member in evacuation and other appropriate normal and emergency procedures and drills relevant to the aeroplane type or variant, in accordance with the requirements as prescribed in Document NA-CATS-OPS 121.

(2) The operator shall ensure that the recurrent training and checking programme includes the theoretical and practical instruction, as well as individual practice, as prescribed in Document NA-CATS-OPS 121.

(3) Upon successful completion of the recurrent training and checking, the operator shall issue a certificate of competency to the flight crew member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

Refresher training

121.03.13 (1) The operator of a large commercial air transport aeroplane shall ensure that each cabin crew member who has been absent from all flying duties for more than six months completes the refresher training specified in the operations manual referred to in regulation 121.04.2, as prescribed in Document NA-CATS-OPS 121.

(2) The operator shall ensure that a cabin crew member who has not been absent from all flying duties, but has not acted as a cabin crew member on a particular aeroplane type for a period of six months, completes -

(a) refresher training in such aeroplane type; or

(b) two familiarisation sectors during commercial operations in such aeroplane type,

before undertaking duties on such aeroplane type.

Checking

121.03.14 (1) The operator of a large commercial air transport aeroplane shall ensure that during or following completion of the training prescribed in regulations 121.03.9, 121.03.10 and 121.03.12, each cabin crew member undergoes a check covering the training received in order to verify his or her proficiency in carrying out safety and emergency duties.

(2) The checks referred to in subregulation (1) shall be performed by competent personnel.

(3) The operator shall ensure that each cabin crew member undergoes checks of the items for initial, aeroplane type and differences, and recurrent training, as prescribed in Document NA-CATS-OPS 121.

DIVISION FOUR : TRAINING OF OTHER FLIGHT CREW MEMBERS

Training

121.03.15 (1) The operator of a large commercial air transport aeroplane shall provide, where applicable, an initial, recurrent and refresher training course for a -

(a) load master;

(b) parachute dispatcher;

(c) navigator; or

(d) any other crew member essential to safe operations, if the operator has such operations personnel in his or her employ.

(2) The training course referred to in subregulation (1) shall be specified in the operations manual referred to in regulation 121.04.2.

SUBPART 4

DOCUMENTATION AND RECORDS

Documents to be retained on the ground

121.04.1 (1) The operator of a large commercial air transport aeroplane shall ensure that -

(a) a copy of the operational flight plan;

(b) copies of the relevant parts of the flight folio;

(c) the load and trim sheet;

(d) the passenger list or cargo manifest;

(e) the special loads notification, if applicable; and

(f) a general declaration in the case of an aeroplane engaged in international flight,

are retained in a safe place at the first point of departure in respect of each flight undertaken by the aeroplane.

(2) The documents referred to in subregulation (1) shall be retained for a period of at least 90 days.

Operations manual

121.04.2 (1) The operator of a large commercial air transport aeroplane shall

draw up an operations manual containing all information required under this Part and setting out the manner in which such operator will operate the air service for which such operator is licenced in terms of the provisions of the Air Services Act, 1949 (Act 51 of 1949).

(2) The operator shall submit the operations manual in duplicate to the Director for approval.

(3) If the Director is satisfied that the operator -

(a) will comply with the provisions of regulation 121.06.7; and

(b) will not operate the air service concerned contrary to any provision of the Act, the Air Services Act, 1949, or the Civil Aviation Offences Act, 1972 (Act 10 of 1972),

the Director shall certify in writing on both copies of the operations manual that such manual has been approved, and shall return one copy of the approved operations manual to the operator.

(4) The operator shall submit an amendment to an approved operations manual in duplicate to the Director for approval.

(5) If the Director is satisfied that the operator will comply with the provisions of subregulation (3)(a) and (b), the Director shall certify in writing on both copies of the amendment to the approved operations manual that such amendment has been approved, and shall return one copy of the approved amendment to the operator.

(6) The operator shall at all times operate the large commercial air transport aeroplane in accordance with the approved operations manual or an approved amendment thereto.

(7) The operator shall -

(a) ensure that all operations personnel are able to understand the language used in those sections of the operations manual which pertain to their duties;

(b) ensure that every flight is conducted in accordance with the operations manual and that those parts of the operations manual which are required for the conduct of a flight, are easily accessible to the flight crew members on board;

(c) make the operations manual available for the use and guidance of operations personnel;

(d) provide the flight crew members with their own personal copy of the sections of the operations manual which are relevant to the duties assigned to them;

(e) keep the operations manual up to date; and

(f) keep the operations manual in a safe place.

(8) The contents of the operations manual shall not contravene the conditions contained in the operating certificate issued to the operator in terms of

regulation 121.06.3.

(9) The structure and contents of the operations manual referred to in subregulation (1) shall be as prescribed in Document NA-CATS-OPS 121.

Aeroplane operating manual

121.04.3 (1) The operator of a large commercial air transport aeroplane shall compile and make available an aeroplane operating manual for use by the crew members in such operator's employ.

(2) The aeroplane operating manual shall contain -

(a) the normal, abnormal and emergency procedures relating to the aeroplane;

(b) details of the aeroplane system; and

(c) the checklists to be used by the crew members.

(3) The operator shall provide each crew member with a copy of those parts of the aeroplane operating manual which are relevant to the operational duties assigned to such crew member.

(4) The operator shall ensure that the aeroplane operating manual is provided in a hard copy or in an approved electronic format.

(5) The aeroplane operating manual shall be included in an operations manual referred to in regulation 121.04.2.

Aeroplane flight manual

121.04.4 The aeroplane flight manual referred to in regulation 91.03.2 may be included in the aeroplane operating manual, referred to in regulation 121.04.3.

Operational flight plan

121.04.5 (1) The operator of a large commercial air transport aeroplane shall ensure that an operational flight plan is completed for each flight undertaken by the aeroplane.

(2) The operational flight plan and its use shall be contained in the operations manual referred to in regulation 121.04.2.

(3) All entries in the operational flight plan shall be current and permanent in nature.

(4) The items to be contained in the operational flight plan shall be as prescribed in Document NA-CATS-OPS 121.

(5) The operational flight plan shall be retained by the operator for a period of at least 90 days.

Flight time and duty period records

121.04.6 (1) The operator of a large commercial air transport aeroplane shall -

(a) maintain current flight time and duty period records of all crew members in such operator's employ; and

(b) retain the flight time and duty period records for a period of 15 calendar months calculated from the date of the last flight of each crew member.

(2) A flight crew member in the part-time employ of an operator shall maintain his or her own flight time and duty period records and shall provide copies thereof to the operator to enable such operator to ensure that such flight crew member does not exceed the limits prescribed in the flight and duty scheme of the operator referred to in regulation 121.02.10.

Records of emergency and survival equipment

121.04.7 (1) The operator of a large commercial air transport aeroplane shall compile a list of all the survival and emergency equipment to be carried in the aeroplane and shall have such list available at all times for immediate communication to rescue coordination centres.

(2) The survival and emergency equipment list shall be included in the operations manual referred to in regulation 121.04.2.

(3) The format and minimum information to be included in the survival and emergency equipment list shall be as prescribed in Document NA-CATS-OPS 121.

Crew member training records

121.04.8 (1) The operator of a large commercial air transport aeroplane shall maintain the records of all training and proficiency checks undertaken by the crew members in such operator's employ, and such records shall incorporate certificates

indicating the successful completion of such training and proficiency checks.

(2) The operator shall retain the record of each flight deck crew member for a period of at least three years and the record of each cabin crew member for a period of at least 12 months from the date on which the crew member concerned has left the employ of such operator.

(3) The certificates referred to in subregulation (1) shall be made available by the operator to the crew member concerned on request.

Load and trim sheet

121.04.9 (1) The operator of a large commercial air transport aeroplane -

(a) registered in Namibia and operated into, within or from Namibia under a licence issued in terms of the Air Services Act, 1949; or

(b) registered in a foreign State and operated into, within or from Namibia under a licence issued in terms of the Air Services Act, 1949,

shall ensure that no flight is undertaken by the aeroplane unless the person superintending the loading of such aeroplane has completed and certified a load and trim sheet.

(2) A load and trim sheet shall be completed in duplicate and one copy shall be carried in the aeroplane and one copy shall be retained in accordance with the provisions of regulation 121.04.1.

(3) The load and trim sheet shall be retained by the operator for a period of at least 90 days calculated from the date on which the flight was undertaken.

(4) The minimum contents of a load and trim sheet shall be as prescribed in Document NA-CATS-OPS 121.

Aeroplane checklist

121.04.10 The operator of a large commercial air transport aeroplane shall, in addition to the aircraft checklist referred to in regulation 91.03.3, compile and make available to the crew and other staff members in such operator's employ, a checklist of the procedures to be followed by such crew and staff members when searching for concealed weapons, explosives or other dangerous devices.

SUBPART 5

INSTRUMENTS AND EQUIPMENT

Approval of instruments and equipment

121.05.1 (1) The operator of a large commercial air transport aeroplane shall ensure that a flight does not commence unless the instruments and equipment required under this Subpart, or otherwise installed on the aeroplane, are -

(a) subject to the provisions of subregulation (2), approved and installed in accordance with the requirements, including operational and airworthiness requirements applicable to such instruments and equipment; and

(b) in a condition for safe operation of the kind being conducted, except as provided for in the MEL.

(2) The operator shall not be required to obtain approval for the -

(a) fuses referred to in regulation 91.04.2;

(b) intrinsically safe electric torches referred to in regulation 91.04.3(1)(d);

(c) accurate time piece referred to in regulations 91.04.4 and 91.04.5;

(d) first-aid equipment referred to in regulations 91.04.16;

(e) megaphones referred to in regulation 91.04.24;

(f) survival equipment referred to in regulation 91.04.29;

(g) sea anchors and equipment for the mooring, anchoring or manoeuvring of seaplanes and amphibians on water, referred to regulation 91.04.30; and

(h) medical equipment referred to in regulation 121.05.13.

Flight, navigation and associated equipment for aeroplanes operated under VFR

121.05.2 (1) The operator of a large commercial air transport aeroplane shall not operate the aeroplane in accordance with VFR, unless such aeroplane is equipped with -

(a) a magnetic compass;

(b) an accurate time-piece showing the time in hours, minutes, and seconds;

(c) a sensitive pressure altimeter with a subscale setting, calibrated in hectopascal, adjustable for any barometric pressure setting likely to be encountered during flight;

(d) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing, including a warning indicator of pitot heater failure;

(e) a vertical-speed indicator;

(f) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;

(g) an attitude indicator;

(h) a stabilised direction indicator; and

(i) a means of indicating on the flight deck the outside air temperature in degrees Celsius.

(2) The second pilot's station of a large commercial air transport aeroplane shall be equipped with -

(a) a sensitive pressure altimeter with a subscale setting calibrated in hectopascal, adjustable for any barometric pressure setting likely to be encountered during flight;

(b) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing, including a warning indicator of pitot heater failure;

(c) a vertical-speed indicator;

(d) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;

(e) an attitude indicator; and

(f) a stabilised direction indicator.

(3) For flights, the duration of which does not exceed 60 minutes, which commence and end at the same aerodrome, and which remain within 25 nautical miles of such aerodrome, the instruments specified in subregulation (1)(f), (g) and (h), and subregulation (2)(d), (e) and (f), may be replaced by a turn-and-slip indicator, or a turn coordinator incorporating a slip indicator, or both an attitude indicator and a slip indicator.

(4) A large commercial air transport aeroplane being operated by night shall be equipped in accordance with the flight and navigation instruments referred to in regulation 121.05.3.

Flight, navigation and associated equipment for aircraft operated under IFR

121.05.3 (1) The operator of a large commercial air transport aeroplane shall not operate the aeroplane in accordance with IFR, unless such aeroplane is equipped with -

(a) a magnetic compass;

(b) an accurate time-piece showing the time in hours, minutes and seconds;

(c) two sensitive pressure altimeters with subscale settings, calibrated in hectopascal, adjustable for any barometric pressure setting likely to be encountered during flight;

(d) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing, including a warning indicator of pitot heater failure;

(e) a vertical-speed indicator;

(f) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;

(g) an attitude indicator;

(h) a stabilised direction indicator;

(i) a means of indicating on the flight deck the outside air temperature in degrees Celsius; and

(j) an alternate source of static pressure for the altimeter and the airspeed and vertical-speed indicators.

(2) The second pilot's station of a large commercial air transport aeroplane shall be equipped with -

(a) a sensitive pressure altimeter with a subscale setting, calibrated in hectopascal, adjustable for any barometric pressure setting likely to be encountered during flight, which may be one of the two altimeters required under subregulation (1)(c);

(b) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunction due to either condensation or icing including a warning indicator of pitot heater failure;

(c) a vertical-speed indicator;

(d) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;

(e) an attitude indicator; and

(f) a stabilised direction indicator.

(3) In addition to the flight and navigation equipment referred to in subregulations (1) and (2), a large commercial air transport aeroplane shall be equipped with a single standby attitude indicator, capable of being used from either pilot's station which -

(a) is powered continuously during normal operation and, after a total failure of the normal electrical generating system is powered from a source independent of the normal electrical generating system;

(b) provides reliable operation for a minimum of 30 minutes after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

(c) operates independently of any other attitude indicating system;

(d) is operative automatically after total failure of the normal electrical generating system; and

(e) is appropriately illuminated during all phases of operation:

Provided that if the standby attitude instrument system is capable of being used through flight attitudes of 360(of pitch and roll, the turn-and-slip indicators may be replaced by slip indicators.

(4) In complying with the provisions of subregulation (3) it shall be clearly evident to the flight deck crew members when such standby attitude indicator is being operated by emergency power.

(5) Where the standby attitude indicator referred to in subregulation (3) has its own dedicated power supply, there shall be an associated indicator, either on the instrument or instrument panel, when such power supply is in use.

Altitude alerting system

121.05.4 The operator of a large turbine propeller or turbojet powered commercial air transport aeroplane shall not operate the aeroplane unless such aeroplane is equipped with an altitude alerting system capable of -

(a) alerting the flight deck crew members upon approaching preselected altitude in either ascent or descent in sufficient

time to establish level flight at such preselected altitude; and

(b) alerting the flight deck crew members when deviating above or below a preselected altitude by at least an aural signal.

Ground proximity warning system

121.05.5 (1) The operator of a large turbine-powered commercial air transport aeroplane with a maximum certificated mass exceeding 15 000 kilograms or authorised to carry more than 30 passengers, of which the certificate of airworthiness was first issued on or after 1 July 1979, shall not operate the aeroplane unless such aeroplane is equipped with a ground proximity warning system.

(2) The ground proximity warning system shall automatically provide, by means of aural signals, which may be supplemented by visual signals, timely and distinctive warnings to the flight deck crew members of sink rate, ground proximity, altitude loss after take off or go-around, incorrect landing configuration and downward glide slope deviation.

Airborne weather radar equipment

121.05.6 The operator of a large commercial air transport aeroplane shall not operate the aeroplane unless such aeroplane is equipped with airborne weather radar equipment whenever such aeroplane is being operated by night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather radars, may be expected to exist along the route.

Cosmic radiation detection equipment

121.05.7 The operator of a large commercial air transport aeroplane which is intended to be operated above 49 000 feet, shall ensure that the aeroplane is equipped with an instrument to measure and indicate continuously the dose rate of total cosmic radiation being received and the cumulative dose on each flight.

Flight deck crew interphone system

121.05.8 The operator of a large commercial air transport aeroplane shall not operate the aeroplane unless such aeroplane is equipped with a flight deck interphone system, including headsets and microphones, not of a hand-held type, for use by all flight deck crew members.

Flight crew member interphone system

121.05.9 (1) The operator of a large commercial air transport aeroplane with a maximum certificated mass exceeding 15 000 kilograms and a maximum approved passenger seating configuration of more than 19 seats, shall not operate the aeroplane unless such aeroplane is equipped with a flight crew member interphone system.

(2) The flight crew member interphone system shall -

(a) operate independently of the public address system except for handsets, microphones, selector switches and signalling devices;

(b) provide a means of two-way communication between the flight deck crew compartment and -

(i) each passenger compartment;

(ii) each galley located on another level than on a passenger deck level; and

(iii) each isolated crew compartment;

(c) be readily accessible for use from each of the required flight deck crew stations on the flight deck;

(d) be readily accessible for use at the required cabin crew member stations close to each separate or pair of floor-level emergency exits;

(e) have an alerting system incorporating aural or visual signals for use by flight deck crew members to alert the cabin crew and for use by cabin crew members to alert the flight deck crew;

(f) have a means of the recipient of a call to determine whether it is a normal call or an emergency call; and

(g) provide on the ground a means of two-way communication between ground personnel and at least two flight deck crew members.

Public address system

121.05.10 (1) The operator of a large commercial air transport aeroplane with

a maximum approved passenger seating configuration of more than 19 seats, shall not operate the aeroplane unless such aeroplane is equipped with a public address system.

(2) The public address system shall -

(a) operate independently of the interphone systems referred to in regulations 121.05.8 and 121.05.9, except for handsets, microphones, selector switches and signalling devices;

(b) be readily accessible for immediate use from each required flight deck crew member station;

(c) be readily accessible for use from at least one cabin crew member station in the cabin;

(d) in the case of a public address system microphone intended for cabin crew member use, be positioned adjacent to a cabin crew member seat located near each required floor-level emergency exit in the passenger compartment;

(e) be capable of operation within 10 seconds by a cabin crew member at each of those stations in the compartment from which the use of such public address system is accessible;

(f) be audible and intelligible in all phases of flight at all

passenger seats, toilets and cabin crew member seats and stations; and

(g) be powered continuously during normal operation.

Windshield wipers

121.05.11 The operator of a large commercial air transport aeroplane shall not operate the aeroplane unless such aeroplane is equipped with a windshield wiper or equivalent system for each required pilot station.

Internal doors and curtains

121.05.12 The operator of a large commercial air transport aeroplane shall not operate the aeroplane unless such aeroplane is equipped with -

(a) in the case of an aeroplane with a maximum approved passenger seating configuration of more than 19 seats, a door between the passenger compartments and the flight deck compartment with a locking device to prevent passengers from opening it without the permission of a flight deck crew member;

(b) a device for opening each door which separates a passenger compartment from another compartment that has emergency exit provisions and such device for opening shall be readily accessible;

(c) if it is necessary to pass through a doorway or curtain

separating the passenger cabin from other areas to reach any required emergency exit from each passenger seat, a device to secure such door or curtain in the open position;

(d) a placard on each internal door or adjacent to a curtain which provides access to an emergency exit, to indicate that the door or curtain shall be secured open during take-off and landing; and

(e) a device for any crew member to unlock any door which is normally accessible to passengers and which can be locked by passengers.

Emergency medical kit

121.05.13 (1) The operator of a large commercial air transport aeroplane with a maximum approved passenger seating configuration of more than 30 seats, shall not operate the aeroplane unless such aeroplane is equipped with the appropriate emergency medical kit as prescribed in Document NA-CATS-OPS 121, if any point on the planned route is more than 60 minutes flying time, at normal cruising speed, from an aerodrome at which qualified medical assistance is available.

(2) The drugs contained in the emergency medical kit shall only be dispensed by a qualified doctor, nurse or similarly qualified personnel acting under the authority of the pilot-in-command of the aeroplane.

(3) The emergency medical kit shall be dust and moisture proof and shall be carried under security conditions, where practicable, on the flight deck.

(4) Personnel authorised by the operator shall carry out periodical inspections of all emergency medical kits to ensure that, as far as is practicable, the contents thereof are in a condition necessary for their intended use.

(5) The supplies in the emergency medical kit shall be replenished at regular intervals, in accordance with instructions contained on their labels, or as circumstances require.

Means for emergency evacuation

121.05.14 (1) The operator of a large commercial air transport aeroplane with passenger emergency exit sill heights -

(a) which are more than 1,83 metres above the ground with the aeroplane on the ground and the landing gear extended; or

(b) which will be more than 1,83 metres above the ground after the collapse of, or failure to extend one or more legs of the landing gear and for which a type certificate was first applied for on or after 1 March 1998,

shall not operate the aeroplane unless such aeroplane has equipment or devices available at each exit to enable passengers and crew members to reach the ground safely in an emergency.

(2) The equipment or devices referred to in subregulation (1) need not be provided at overwing exits if the designated place on the aeroplane structure at which the escape route terminates, is less than 1,83 metres from the ground with

the aeroplane on the ground, the landing gear extended and the flaps in the take-off or landing position, whichever flap position is higher from the ground.

(3) In an aeroplane required to have a separate emergency exit for the flight deck crew and -

(a) for which the lowest point of the emergency exit is more than 1,83 metres above the ground with the landing gear extended; or

(b) for which the application for a type certificate was applied for on or after 1 March 1998, will be more than 1,83 metres above the ground after the collapse of, or failure to extend one or more legs of the landing gear,

there shall be a device to assist the flight deck crew members in reaching the ground safely in an emergency.

SUBPART 6

OPERATING CERTIFICATE

Operating certificate

121.06.1 The operator of a large commercial air transport aeroplane shall not operate the aeroplane unless such operator is the holder of a valid -

(a) licence issued in terms of the Air Services Act, 1949; and

(b) operating certificate issued in terms of regulation 121.06.3.

Application for operating certificate

121.06.2 An application for an operating certificate shall be made to the Director in the appropriate form as prescribed in Document NA-CATS-OPS 121 and shall be accompanied by the appropriate fee as prescribed in Part 187.

Adjudication of application for operating certificate

121.06.3 (1) In considering an application referred to in regulation 121.06.2 the Director may conduct the investigation he or she deems necessary.

(2) An application shall be granted and the operating certificate issued if the Director is satisfied that -

(a) the applicant will comply with the provisions of

regulation 121.06.7; and

(b) the applicant will not operate the air service concerned contrary to any provision of the Act, the Civil Aviation Offences Act, 1972 (Act 10 of 1972), or the Air Services Act, 1949.

(3) If the Director is not so satisfied he or she shall notify the operator thereof, stating the reasons in the notification, and grant the operator the opportunity to rectify or supplement any defect within the period determined by the Director, after which period the Director shall grant or refuse the application concerned.

(4) An operating certificate shall be issued on the appropriate form as prescribed in Document NA-CATS-OPS 121, under such conditions which the Director may determine.

Period of validity of operating certificate

121.06.4 (1) An operating certificate shall be valid for such period as may be determined by the Director: Provided that such period shall not exceed a period of 12 months from the date of issuing thereof.

(2) If the holder of an operating certificate applies at least 30 days prior to the expiry thereof for a new operating certificate, that first-mentioned operating certificate shall, notwithstanding the provisions of subsection (1), remain in force until such holder is notified by the Director of the result of the application for the issuing of a new operating certificate.

Safety inspections and audits

121.06.5 (1) An applicant for the issuing of an operating certificate shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to verify the validity of an application made in terms of regulation 121.06.2.

(2) The holder of an operating certificate shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

Suspension and cancellation of operating certificate and appeal

121.06.6 (1) An authorised officer, inspector or authorised person may suspend for a period not exceeding 30 days, an operating certificate issued under this Subpart, if -

(a) after a safety inspection and audit carried out in terms of regulation 121.06.5, it is evident that the holder of the operating certificate does not comply with the requirements prescribed in this Part, and such holder fails to remedy such non-compliance within 30 days after receiving notice in writing from the authorised officer, inspector or authorised person to do so; or

(b) the authorised officer, inspector or authorised person is prevented by the holder of the operating certificate to carry out a safety inspection and audit in terms of regulation 121.06.5; or

(c) the suspension is necessary in the interests of aviation safety.

(2) The authorised officer, inspector or authorised person who has suspended an operating certificate in terms of subregulation (1), shall deliver a report in writing to the Director, stating the reasons why, in his or her opinion, the suspended operating certificate should be cancelled.

(3) The authorised officer, inspector or authorised person concerned shall submit a copy of the report referred to in subregulation (2), to the holder of the operating certificate which has been suspended, and shall furnish proof of such submission for the information of the Director.

(4) The holder of an operating certificate who feels aggrieved by the suspension of the approval may appeal against such suspension to the Director, within 30 days after such holder becomes aware of such suspension.

(5) An appellant shall deliver an appeal in writing, stating the reasons why, in his or her opinion, the suspension should be varied or set aside.

(6) The appellant shall submit a copy of the appeal and any documents or records supporting such appeal, to the authorised officer, inspector or authorised person concerned and shall furnish proof of such submission for the information of the Director.

(7) The authorised officer, inspector or authorised person concerned may, within 30 days of receipt of the copy of the appeal referred to in subregulation (6), deliver his or her written reply to such appeal to the Director.

(8) The Director may -

(a) adjudicate the appeal on the basis of the documents submitted to him or her; or

(b) order the appellant and the authorised officer, inspector or authorised person concerned to appear before him or her, either in person or through a representative, at a time and place determined by him or her, to give evidence.

(9) The Director may confirm, vary or set aside the suspension referred to in subregulation (1).

(10) The Director shall -

(a) if he or she confirms the suspension in terms of subregulation (9); or

(b) if an operating certificate is suspended in terms of subregulation (1) and the holder thereof does not appeal against such suspension in terms of subregulation (4),

cancel the operating certificate concerned.

Duties of holder of operating certificate

121.06.7 The holder of an operating certificate shall -

(a) notify the Director in the manner as prescribed in

Document NA-CATS-OPS 121, before any change is effected to the particulars on the operating certificate;

(b) keep the operating certificate in a safe place and produce such operating certificate to an authorised officer, inspector or authorised person for inspection if so requested by such officer, inspector or person; and

(c) not commence or continue with the air service concerned unless such holder is the holder of a valid operating certificate.

Register of operating certificates

121.06.8 (1) The Director shall maintain a register of all operating certificates issued in terms of the regulations in this Part.

(2) The register shall contain the following particulars:

(a) The full name and, if any, the trade name of the holder of the operating certificate;

(b) the postal address of the holder of the operating certificate;

(c) the number of the operating certificate issued to the holder;

(d) particulars of the type of air service for which the

operating certificate was issued;

(e) particulars of the category of aeroplane for which the operating certificate was issued; and

(f) the date on which the operating certificate was issued.

(3) The particulars referred to in subregulation (2) shall be recorded in the register within 30 days from the date on which the operating certificate is issued by the Director.

(4) The register shall be kept in a safe place at the office of the Director.

(5) A copy of the register shall be furnished by the Director, on payment of the appropriate fee as prescribed in Part 187, to any person who requests the copy.

SUBPART 7

FLIGHT OPERATIONS

Routes and areas of operation

121.07.1 (1) The operator of a large commercial air transport aeroplane shall ensure that operations are only conducted along such routes or within such areas, for which -

(a) in the case of scheduled public air transport operations-

(i) ground facilities and services, including meteorological services, are provided which are adequate for the planned operation; and

(ii) appropriate maps and charts are available;

(b) approval or authorisation has been obtained, where required, from the authority concerned;

(c) if a twin-engine aeroplane is used, adequate aerodromes are available within the time or distance limitations as prescribed in Document NA-CATS-OPS 121; and

(d) if a single-engine aeroplane is used, surfaces are available which permit a safe forced landing to be executed.

(2) The operator shall ensure that -

(a) the performance of the aeroplane intended to be used, is adequate to comply with minimum flight altitude requirements; and

(b) the equipment of the aeroplane intended to be used, complies with the minimum requirements for the planned operation.

(3) The operator shall not, unless prior written approval has been obtained from the Director, operate a twin-engine aeroplane, with a maximum certificated mass exceeding 8 618 kilograms or a maximum approved passenger seating configuration of more than 19 seats, over a route which contains a point further from an adequate and suitable aerodrome than the distance flown, under standard conditions in still air, in 60 minutes at the one-engine inoperative cruise speed.

Establishment of procedures

121.07.2 The operator of a large commercial air transport aeroplane shall -

(a) establish procedures and instructions, for each aeroplane type, containing ground staff and crew member's duties for all types of operations on the ground and in flight;

(b) establish a checklist system to be used by flight deck crew members for all phases of operation under normal, abnormal and emergency conditions, to ensure that the operating procedures in the operations manual referred to in regulation 121.04.2, are followed; and

(c) ensure that flight crew members do not perform any activities during critical phases of the flight other than those required for the safe operation of the aeroplane.

Operational control and supervision

121.07.3 The operator of a large commercial air transport aeroplane shall exercise operational control and establish and maintain an approved method of supervision of flight operations.

Competency of operations personnel

121.07.4 The operator of a large commercial air transport aeroplane shall ensure that all personnel assigned to, or directly involved in ground and flight operations, are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole.

Use of air traffic services

121.07.5 The operator of a large commercial air transport aeroplane shall ensure that air traffic services are used for all flights whenever available.

Minimum flight altitudes

121.07.6 (1) The operator of a large commercial air transport aeroplane shall establish minimum flight altitudes and the methods to determine such minimum flight altitudes for all route segments to be flown which provide the required terrain clearance, taking into account the operating limitations referred to in Subpart 8 and

the minimum altitudes prescribed in Subpart 6 of Part 91.

(2) The operator shall take into account the following factors when establishing minimum flight altitudes:

(a) The accuracy with which the position of the aeroplane can be determined;

(b) the probable inaccuracies in the indications of the altimeters used;

(c) the characteristics of the terrain along the routes or in the areas where operations are to be conducted;

(d) the probability of encountering unfavourable meteorological conditions; and

(e) possible inaccuracies in aeronautical charts.

(3) In complying with the provisions of subregulation (2), the operator shall give due consideration to -

(a) corrections for temperature and pressure variations from standard values;

(b) the air traffic control requirements; and

(c) any contingencies which may occur along the planned route.

Aerodrome operating minima

121.07.7 (1) The operator of a large commercial air transport aeroplane shall establish aerodrome operating minima in accordance with the provisions of subregulations (2), (3), (4) and (5) and in conjunction with the instrument approach and landing charts for each aerodrome intended to be used either as destination or as an alternate.

(2) The operator shall establish aerodrome operating minima for each aerodrome planned to be used, which shall not be lower than the values prescribed in Document NA-CATS-OPS 121.

(3) The method of determining aerodrome operating minima shall be approved by the Director.

(4) The aerodrome operating minima established by the operator shall not be lower than any aerodrome operating minima established by the authority of a State in which the aerodrome concerned is located: Provided that if such authority approves such lower aerodrome operating minima established by the operator, the lower aerodrome operating minima shall apply.

Smoking in aeroplane

121.07.8 No person shall smoke in a Namibian registered aeroplane when such aeroplane is operated on a scheduled public air transport service and has departed from and will be landing within Namibia.

Ditching

121.07.9 The operator of a large commercial air transport aeroplane with an

approved passenger seating configuration of more than 30 seats or on extended over-water flights, shall not operate the aeroplane unless such aeroplane has been certified as having adequate characteristics for ditching or has been approved as adequate for ditching.

Fuel policy

121.07.10 (1) The operator of a large commercial air transport aeroplane shall establish a fuel policy for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserve fuel to cover deviations from the planned operation.

(2) The operator shall ensure that the planning of a flight is only based upon -

(a) procedures, tables or graphs which are contained in or derived from the operations manual referred to in regulation 121.04.2, or current aeroplane-specific data;

(b) the operating conditions under which the flight is to be conducted including -

(i) realistic aeroplane fuel consumption data;

(ii) anticipated masses;

(iii) expected meteorological conditions; and

(iv) air traffic service procedures and restrictions.

(3) The operator shall ensure that the calculation of usable fuel required by such aeroplane for a flight includes -

(a) taxi fuel;

(b) trip fuel;

(c) reserve fuel consisting of -

(i) contingency fuel as prescribed in Document NA-CATS-OPS 121;

(ii) alternate fuel, if a destination alternate is required;

(iii) two-hours island-holding fuel in situations where the destination is remote or no suitable alternate aerodrome exists;

(iv) final reserve fuel;

(v) additional fuel, if required by the type of operation; and

(d) extra fuel, if required by the pilot-in-command.

(4) The operator shall ensure that in-flight replanning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination other than originally planned includes -

(a) trip fuel for the remainder of the flight;

(b) reserve fuel consisting of -

(i) contingency fuel;

(ii) alternate fuel, if a destination alternate is required, including selection of the departure aerodrome as the destination alternate;

(iii) final reserve fuel; and

(iv) additional fuel, if required by the type of operation; and

(c) extra fuel, if required by the pilot-in-command.

Fuel and oil supply

121.07.11 The operator of a large commercial air transport aeroplane shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out.

Instrument approach and departure procedures

121.07.12 The operator of a large commercial air transport aeroplane may implement instrument approach and departure procedures, other than instrument approach and departure procedures referred to in subregulation 91.07.12(1), if required: Provided that such instrument approach and departure procedures have been approved by -

(a) the authority of the State in which the aerodrome to be used, is located; and

(b) the Director.

Noise abatement procedures

121.07.13 (1) The operator of a large commercial air transport aeroplane shall establish operating procedures for noise abatement.

(2) Take-off and climb procedures for noise abatement specified by the operator for any one aeroplane type shall be the same for all aerodromes.

Carriage of infants and children

121.07.14 (1) The operator of a large commercial air transport aeroplane shall ensure that an infant is only carried when properly secured with a child restraint device or in the arms or on the lap of an adult passenger or in a skycot: Provided that, in the case of a skycot, the skycot is -

(a) restrained so as to prevent it from moving under the maximum accelerations to be expected in flight; and

(b) fitted with a restraining device so as to ensure that the infant will not be thrown from such skycot under the maximum accelerations to be expected in flight.

(2) The operator shall ensure that precautions are taken to ensure that, at the times seat belts are required to be worn in flight, the infant carried in the

skycot will not be thrown from such skycot under the maximum accelerations to be expected in flight.

(3) Infants shall not be seated in front of exits.

(4) Infants shall not be carried behind a bulkhead unless a child restraint device is used during critical phases of flight and during turbulence.

(5) Skycots may not be used during critical phases of flight.

(6) Skycots shall be positioned in such a way that they do not prevent or hinder the movement of adjacent passengers or block exits.

(7) When an infant is carried in the arms or on the lap of a passenger, the seat belt, when required to be worn, shall be fastened around the passenger carrying or nursing the infant, but not around the infant.

(8) When an infant is carried in the arms or on the lap of a passenger, the name of the infant shall be bracketed on the passenger list with the name of the person carrying or nursing the infant.

(9) An infant may be seated in a car-type infant seat, approved for use in an aeroplane, provided it is secured to the aeroplane seat.

(10) A car-type infant seat referred to in subregulation (6) shall not be located in the same row or a row directly forward or aft of an emergency exit.

Carriage of persons with a disability

121.07.15 (1) The operator of a large commercial air transport aeroplane shall

establish procedures, including identification, seating positions and handling in the event of an emergency, for the carriage of passengers with a disability.

(2) The operator shall ensure that -

(a) the pilot-in-command of the aeroplane is notified when a passenger with a disability is to be carried on board;

(b) a passenger with a disability is not seated in the same row or a row directly forward or aft of an emergency exit;

(c) individual briefings on emergency procedures are given to a passenger with a disability and his or her able-bodied assistant, appropriate to the needs of such passenger; and

(d) the person giving the briefing shall enquire as to the most appropriate manner of assisting the person with a disability so as to prevent pain or injury to that person.

(3) In the case of the carriage of a stretcher patient in the aeroplane -

(a) the stretcher shall be secured in such aeroplane so as to prevent it from moving under the maximum accelerations likely to be experienced in flight and in an emergency alighting such as a ditching;

(b) the patient shall be secured by an approved harness to the stretcher or aeroplane structure; and

(c) an able-bodied assistant shall accompany each stretcher patient.

(4) A mentally disturbed person shall not be carried in the aeroplane unless -

(a) accompanied by an able-bodied assistant; and

(b) a medical certificate has been issued by a medical practitioner certifying such mentally disturbed person's suitability for carriage by air, and confirming that there is no risk of violence from such person.

(5) The operator shall undertake the carriage of a mentally ill person who, according to his or her medical history, may become violent, only after special permission has been obtained from the Director by such operator.

(6) A passenger with a splinted or artificial limb may travel unaccompanied provided he or she is able to assist himself or herself.

(7) The affected limb or supporting aids of a passenger referred to in subregulation (6) shall not obstruct an aisle or any emergency exit or equipment.

(8) If a passenger with a splinted or artificial limb cannot assist himself or herself then he or she shall be accompanied by an able-bodied assistant.

Limitations on the carriage of infants, children and passengers with a disability

121.07.16 (1) The maximum number of passengers with a disability,

unaccompanied minors, or the combination of such passengers and minors, which may be carried by the operator of a large commercial air transport aeroplane, is limited to one per unit of 20 passenger capacity or part thereof to a maximum of 10 such passengers or minors.

(2) At least one able-bodied assistant shall be carried for every group of five, passengers with a disability or unaccompanied minors, or a part or combination thereof, and such assistant shall be assigned with the responsibility of the safety of such passengers or minors: Provided that the passengers with a disability can assist themselves.

(3) In addition to the provisions of subregulation (2), for each one passenger with a disability who cannot assist himself or herself, an able-bodied assistant shall be assigned to solely assist such passenger.

(4) The operator may establish procedures, other than the procedures referred to in subregulations (1), (2) and (3), for the carriage of infants, children, and passengers with a disability: Provided that such procedures -

(a) do not jeopardise aviation safety; and

(b) prior written approval is obtained from the Director.

Carriage of inadmissible passengers, deportees or persons in custody

121.07.17 (1) The operator of a large commercial air transport aeroplane shall establish procedures for the transportation of inadmissible passengers, deportees or persons in custody to ensure the safety of the aeroplane and its occupants.

(2) The pilot-in-command the aeroplane shall be notified by the operator of such aeroplane prior to departure, of the intended carriage, and reason for carriage, of any of the persons referred to in subregulation (1).

(3) For the purposes of this regulation, "inadmissible passenger" means any person who is not entitled to board the aeroplane and includes those persons who are not in the possession of a valid passenger ticket, passport or visa.

Carry-on baggage

121.07.18 (1) The operator of a large commercial air transport aeroplane shall establish adequate procedures to ensure that only such baggage is carried onto the aeroplane and taken into the passenger cabin as can be adequately and securely stowed.

(2) The minimum requirements for the procedures referred to in subregulation (1) shall be as prescribed in Document NA-CATS-OPS 121.

Securing of passenger cabin and galley

121.07.19 (1) Before take-off and landing and whenever deemed necessary in the interest of safety, the pilot-in-command of a large commercial air transport aeroplane shall ensure that -

(a) all equipment, baggage and loose articles in the cabin of the aeroplane, including passenger service items and crew members' and passengers' personal affects, are properly secured and stowed so as to avoid the possibility of injury to persons or damage to such aeroplane through the movement of such articles caused by in-flight turbulence

or by unusual accelerations or manoeuvres; and

(b) all aisles, passage ways, exits and escape paths are kept clear of obstructions.

(2) All solid articles shall be placed in approved stowage areas in the aeroplane, at all times whenever the seat belt lights are illuminated or when so directed by the pilot-in-command of such aeroplane.

(3) For the purposes of subregulation (2), "approved stowage area" means -

(a) the area under a passenger seat; or

(b) a locker, overhead or other, utilised in accordance with the placarded mass limitation of the locker.

(4) No take-off or landing shall be commenced by the pilot-in-command of the aeroplane, unless he or she has been informed of the safe condition of the cabin.

Passenger services

121.07.20 (1) Except when in use, all items provided for passenger services, including food containers, thermos flasks and servicing trays, shall be carried in their respective stowages and secured against movement likely to cause injury to persons or damage to the aeroplane.

(2) All items referred to in subregulation (1) shall be stowed during

take-off and landing or during emergency situations, as directed by the pilot-in-command of the aeroplane.

(3) Any item which cannot be accommodated in the stowage, referred to in subregulation (1), shall not be permitted in the cabin of the aeroplane.

(4) Securing of the cabin shall be completed by the cabin crew members before the approach for landing of the aeroplane is commenced.

(5) If passenger services are provided while the aeroplane is on the ground, no passenger service equipment shall obstruct the aisles or exits of the aeroplane.

Incidents and defects

121.07.21 (1) The operator of a large commercial air transport aeroplane shall establish adequate inspection and reporting procedures to ensure that defective equipment are reported to the pilot-in-command of the aeroplane before take-off.

(2) The procedures referred to in subregulation (1) shall be extended to include the reporting to the operator's safety division of all incidents or the exceeding of limitations that may occur while the crew are embarked on the aeroplane and of defective equipment found on board.

(3) Upon receipt of the reports referred to in subregulation (2), the safety division of the operator will compile a report and submit such report on a monthly basis to the Director.

SUBPART 8

AEROPLANE PERFORMANCE OPERATING LIMITATIONS

Classification

121.08.1 (1) The classification of aeroplanes for performance limitation purposes is prescribed in regulation 91.09.4.

(2) The operator of a large commercial air transport aeroplane shall ensure that -

(a) a Class A aeroplane is operated in accordance with the operating limitations prescribed in Division One; and

(b) a Class C aeroplane is operated in accordance with the operating limitations prescribed in Division Three: Provided that a Class C aeroplane which does not comply with the requirements prescribed in Division Three for take-off and landing, shall be operated in accordance with the operating limitations prescribed in Division Two for a Class B aeroplane.

(3) Where specific design characteristics of an aeroplane prevents compliance with the regulations in Division One, Two or Three of this Subpart, the operator shall, notwithstanding the provisions of subregulation (2), ensure that the aeroplane is operated in accordance with such standard that a level of safety equivalent to the level of safety prescribed in the appropriate Division in this Subpart is maintained.

(4) Notwithstanding the provisions of subregulation (2), the operator of a large commercial air transport aeroplane which does not comply with the operating limitations prescribed in Division One on the date of commencement of the Regulations, may until 30 June 1999 operate a Class A aeroplane under operating limitations approved by the Director: Provided that such limitations shall not be less restrictive than the operating limitations prescribed in Division Two.

(5) The provisions of subregulation (4) shall not apply in respect of any new operation undertaken after the date of commencement of the Regulations.

General provisions for all classes of aeroplane

121.08.2 (1) The operator of a large commercial air transport aeroplane shall ensure that the mass of the aeroplane, at the start of the take-off, is not greater than the mass at which the requirements prescribed in the appropriate Division can be complied with for the flight to be undertaken, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is provided for in the particular provision.

(2) The operator shall ensure that the approved performance data contained in the aeroplane flight manual referred to in regulation 121.04.4, is used to determine compliance with the requirements prescribed in the appropriate Division, supplemented as necessary with other approved data prescribed in the appropriate Division.

DIVISION ONE : CLASS A AEROPLANE

General

121.08.3 (1) The operator of a Class A aeroplane shall ensure that, for determining compliance with the requirements prescribed in this Division, the approved performance data in the aeroplane flight manual referred to in regulation 121.04.4, is supplemented as necessary with other approved data if the approved performance data in such aeroplane flight manual are insufficient in respect of -

(a) accounting for reasonably expected adverse operating conditions such as take-off and landing on contaminated runways; and

(b) consideration of engine failure in all flight phases.

(2) The operator shall ensure that, in the case of a wet and contaminated runway, performance data determined in accordance with an approved method is used.

Take-off

121.08.4 (1) The operator of a Class A aeroplane shall ensure that the take-off mass of the aeroplane does not exceed the maximum certificated mass for the pressure altitude and the ambient temperature at the aerodrome of departure.

(2) The operator shall comply with the following requirements when determining the maximum permitted take-off mass of the aeroplane at the aerodrome of departure:

(a) The required accelerate-stop distance shall not exceed the accelerate-stop distance available;

(b) the required take-off distance shall not exceed the take-off distance available, with a clearway distance not exceeding half of the take-off run available;

(c) the required take-off run shall not exceed the take-off run available;

(d) compliance with the provisions of this subregulation shall be shown using a single value of V_1 for the rejected and continued take-off; and

(e) on a wet or contaminated runway, the take-off mass shall not exceed the take-off mass permitted for a take-off on a dry runway under the same conditions.

(3) When determining the maximum permitted take-off mass referred to in subregulation (2), the operator shall take account of -

(a) the pressure altitude at the aerodrome;

(b) the ambient temperature at the aerodrome;

(c) the runway surface condition and the type of runway surface;

(d) the runway slope in the direction of take-off;

(e) brake energy;

(f) tyre-speed limit;

(g) pilot-reaction time;

(h) not more than 50 per cent of the reported head-wind component or not less than 150 per cent of the reported tail-wind component; and

(i) the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

Net take-off flight path

121.08.5 (1) The operator of a Class A aeroplane shall ensure that the net take-off flight path clears all obstacles by a vertical distance of at least 35 feet or by a horizontal distance of at least 90 metres plus 0,125 x D, where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available.

(2) When complying with the provisions of subregulation (1), the operator shall take account of -

(a) the mass of the aeroplane at the commencement of the take-off run;

(b) the pressure altitude at the aerodrome;

(c) the ambient temperature at the aerodrome; and

(d) not more than 50 per cent of the reported head-wind component or not less than 150 per cent of the reported tail-wind component.

(3) When complying with the provisions of subregulation (1), track changes shall not be allowed up to the point on the net take-off flight path where a height of 50 feet above the take-off surface has been achieved and thereafter, up to a height of 400 feet, it is assumed that the aeroplane is banked by not more than 15(: Provided that -

(a) above 400 feet, height bank angles greater than 15(, but not more than 25(, may be scheduled; and

(b) adequate allowance is made for the effect of bank angle on operating speeds and flight path, including the distance increments resulting from increased operating speed.

(4) When complying with the provisions of subregulation (1) in those cases where the intended flight path does not require track changes of more than 15(, the operator shall not be required to consider those obstacles which have a lateral distance greater than -

(a) 300 metres, if the pilot is able to maintain the required navigation accuracy through the obstacle accountability area; or

(b) 600 metres, for flights under all other conditions.

(5) When complying with the provisions of subregulation (1) in

those cases where the intended flight path does require track changes of more than 15(, the operator shall not be required to consider those obstacles which have a lateral distance greater than -

(a) 600 metres, if the pilot is able to maintain the required navigation accuracy through the obstacle accountability area; or

(b) 900 metres for flights under all other conditions.

(6) The operator shall establish contingency procedures to satisfy the requirements prescribed in this regulation in order to provide a safe route avoiding obstacles to enable the aeroplane to land safely at the aerodrome of departure or at a take-off alternate aerodrome, if so required.

En-route with one engine inoperative

121.08.6 (1) The operator of a Class A aeroplane shall demonstrate that the one-engine inoperative en-route net flight path data for the aeroplane, shown in the aeroplane flight manual referred to in regulation 121.04.4, appropriate to the meteorological conditions expected for the flight, complies with subregulation (2) or (3) at all points along the planned route.

(2) The net flight path shall have a positive slope at 1 500 feet above the aerodrome, where the landing is assumed to be made after engine failure.

(3) At altitudes and under meteorological conditions where icing protection systems shall be operated, the effect of the use of such icing protection systems on the net flight path shall be taken into account.

(4) The slope of the net flight path shall be positive at an altitude of at least 1 000 feet above all terrain and obstructions along the route within 10 nautical miles on either side of the intended track.

(5) The net flight path shall permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made in accordance with regulation 121.08.9 or 121.08.10, as the case may be, the net flight path clearing vertically, by at least 2 000 feet, all terrain and obstructions along the route within 10 nautical miles on either side of the intended track in accordance with the provisions of subregulations (1) to (4): Provided that -

(a) the engine is assumed to fail at the most critical point along the route, and allowance is made for indecision and navigation error;

(b) account is taken of the effects of winds on the flight path;

(c) fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used; and

(d) the aerodrome where the aeroplane is assumed to land after engine failure, complies with the following criteria:

(i) The performance requirements at the expected landing mass are complied with; and

(ii) weather reports and forecasts, or any combination thereof, and field condition reports indicate that a

safe landing can be accomplished at the estimated time of arrival.

(6) When complying with the provisions of this regulation, the operator may reduce the width margins referred to in subregulations (4) and (5), to 5 nautical miles if the required navigation accuracy can be achieved.

En-route with two engines inoperative in the case of aeroplanes with three or more engines

121.08.7 (1) The operator of a Class A aeroplane with three or more engines, shall demonstrate that at no point along the intended track such aeroplane is more than 90 minutes, at the all-engines long-range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are complied with, unless the aeroplane complies with the provisions of subregulations (2) to (6) inclusive.

(2) The two-engines inoperative en-route net flight path data shall permit the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously, to an aerodrome at which it is possible to land and come to a complete stop when using the prescribed procedure for a landing with two engines inoperative.

(3) The net flight path shall clear vertically, by at least 2 000 feet, all terrain and obstructions along the route within 5 nautical miles on either side of the intended track.

(4) At altitudes and under meteorological conditions where icing protection systems shall be operated, the effect of the use of such icing protection systems on the net flight path data shall be taken into account.

(5) The two engines shall be assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all-engines long-range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements are complied with.

(6) The net flight path shall have a positive slope at an altitude of 1 500 feet above the aerodrome where the landing is assumed to be made after the failure of two engines.

(7) Fuel jettisoning shall be permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

(8) The expected mass of the aeroplane at the point where the two engines are assumed to fail, shall not be less than the mass which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 1 500 feet directly over the landing area and thereafter to fly level for 15 minutes.

Landing at destination and alternate aerodromes

121.08.8 (1) The operator of a Class A aeroplane shall ensure that the landing mass of the aeroplane, determined in accordance with the provisions of regulation 121.08.2(1), does not exceed the maximum landing mass specified for the altitude and the ambient temperature expected for the estimated time of landing at the destination and alternate aerodrome.

(2) For instrument approaches with decision heights below 200 feet, the operator shall verify that the approach mass of the aeroplane, taking into account the take-off mass and the fuel expected to be consumed in flight, allows a

missed approach gradient of climb of at least 2,5 per cent in the approach configuration with one engine inoperative, or an approved alternative procedure.

Landing on dry runways

121.08.9 (1) The operator of a Class A aeroplane shall ensure that the landing mass of the aeroplane determined in accordance with the provisions of regulation 121.08.2(1) for the estimated time of landing, allows a full stop landing from 50 feet above the threshold within 70 per cent of the landing distance available at the destination aerodrome and at any alternate aerodrome: Provided that the Director may permit the use of a screen height of less than 50 feet, but not less than 35 feet, for steep-approach and short-landing procedures.

(2) When complying with the provisions of subregulation (1), the operator shall take account of -

(a) the altitude at the aerodrome; and

(b) not more than 50 per cent of the reported head-wind component or not less than 150 per cent of the reported tail-wind component.

(3) For dispatching the aeroplane in accordance with subregulation (1), it shall be assumed that -

(a) such aeroplane will land on the most favourable runway, in still air; and

(b) such aeroplane will land on the runway most likely to be

assigned considering the probable wind speed and direction and the ground handling characteristics of the aeroplane, and considering other conditions such as landing aids and terrain.

(4) If the operator is unable to comply with the provisions of subregulation (3)(b) for the destination aerodrome, the aeroplane may be dispatched if an alternate aerodrome is designated which permits full compliance with the provisions of subregulations (1), (2) and (3).

Landing on wet and contaminated runways

121.08.10 (1) The operator of a Class A aeroplane shall ensure that, when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be wet, the landing distance available is at least 115 per cent of the required landing distance determined in accordance with the provisions of regulation 121.08.9.

(2) The operator shall ensure that, when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be contaminated, the landing distance available must be at least the landing distance determined in accordance with the provisions of subregulation (1) or at least 115 per cent of the landing distance determined in accordance with approved contaminated landing distance data or an equivalent thereof, whichever is the greater.

(3) A landing distance on a wet runway shorter than the landing distance required by the provisions of subregulation (1), but not less than the landing distance required by the provisions of regulation 121.08.9(1), may be used if the

aeroplane flight manual referred to in regulation 121.04.4 includes specific additional information on landing distances on wet runways.

DIVISION TWO : CLASS B AEROPLANE

General

121.08.11 The regulations in this Division shall apply to -

(a) the operator of a Class A aeroplane which does not comply with the operating limitations prescribed in Division One, on the date of commencement of the Regulations who may, until 30 June 1999, operate the aeroplane under operating limitations approved by the Director: Provided that such limitations shall not be less restrictive than the operating limitations prescribed in this Division; and

(b) the operator of a Class C aeroplane which does not comply with the requirements prescribed in Division Three for take-off and landing.

Take-off

121.08.12 (1) The operator of a Class A or Class C aeroplane referred to in regulation 121.08.11, shall ensure that the take-off mass of the aeroplane does not exceed the maximum certificated mass for the pressure altitude and the ambient temperature at the aerodrome of departure.

(2) The operator shall ensure that the take-off distance, as specified in the aeroplane flight manual referred to in regulation 121.04.4, multiplied by a factor of 1.3, does not exceed the take-off run available.

(3) When complying with the provisions of subregulation (2), the operator shall take account of -

(a) the mass of the aeroplane at the commencement of the take-off run; and

(b) the requirements referred to in regulation 121.08.4(3).

Take-off flight path

121.08.13 (1) The operator of a Class A or Class C aeroplane referred to in regulation 121.08.11, shall ensure that the take-off flight path of the aeroplane clears all obstacles by a vertical margin of at least 295 feet plus 0,125 x D, where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available except as prescribed in subregulations (3) and (4).

(2) When complying with the provisions of subregulation (1), it shall be assumed that -

(a) the take-off flight path begins at a height of 50 feet above the take-off surface at the end of the take-off distance prescribed in regulation 121.08.12(2) and ends at a height of 1 500 feet above the take-off surface;

(b) the aeroplane is not banked before such aeroplane has reached a height of 50 feet above the take-off surface, and that thereafter the angle of bank does not exceed 15(;

(c) failure of the critical engine occurs at the point of the all-engines take-off flight path where the loss of visual reference for the purpose of avoiding obstacles is expected to occur;

(d) the gradient of the take-off flight path from 50 feet to the assumed engine-failure height is equal to the average all-engines gradient during climb and transition to the en-route configuration, multiplied by a factor of 0,77; and

(e) the gradient of the take-off flight path from the height reached in accordance with the provisions of paragraph (d) to the end of the take-off flight path, is equal to the one-engine-inoperative en-route climb gradient shown in the aeroplane flight manual referred to in regulation 121.04.4.

(3) When complying with the provisions of subregulation (1), in those cases where the intended flight path does not require track changes of more than 15(, the operator need not consider obstacles which have a lateral distance greater than -

(a) 300 metres, if the flight is conducted under conditions allowing visual course guidance navigation, or if navigation aids are available enabling the pilot to maintain the intended flight path with the same accuracy; and

(b) 600 metres for flights under all other conditions.

(4) When complying with the provisions of subregulation (1), in those cases where the intended flight path requires heading changes of more than 15(, the operator need not consider obstacles which have a lateral distance greater than -

(a) 600 metres for flights under conditions allowing visual course guidance navigation; or

(b) 900 metres for flights under all other conditions.

(5) When complying with the provisions of this regulation, the operator shall take account of the requirements referred to in regulation 121.08.5(2).

En-route

121.08.14 (1) The operator of a Class A or Class C aeroplane referred to in regulation 121.08.11, shall be able to demonstrate that the aeroplane, in the meteorological conditions expected for the flight, and in the event of the failure of one engine, with the remaining engine or engines operating within the maximum continuous power conditions specified, is capable of continuing flight at or above the relevant minimum altitudes for safe flight stated in the operations manual referred to in regulation 121.04.2, to a point 1 000 feet above an aerodrome at which the performance requirements can be complied with.

(2) When complying with the provisions of subregulation (1) -

(a) the aeroplane shall be assumed not to be flying at an altitude exceeding the altitude at which the rate of climb equals 300 feet per minute with all engines operating

within the maximum continuous power conditions specified; and

(b) the assumed en-route gradient with one-engine-inoperative shall be the gross gradient minus 0,5 per cent gradient.

Landing at destination and alternate aerodromes

121.08.15 The operator of a Class A or Class C aeroplane referred to in regulation 121.08.11, shall ensure that the landing mass of the aeroplane does not exceed the maximum landing mass specified for the altitude and the ambient temperature expected for the estimated time of arrival at the destination and alternate aerodrome.

Landing on dry runways

121.08.16 (1) The operator of a Class A or Class C aeroplane referred to in regulation 121.08.11, shall ensure that the landing mass of the aeroplane, for the estimated time of arrival allows a full stop landing from 50 feet above the threshold within 70 per cent of the landing distance available at the destination aerodrome and at any alternate aerodrome: Provided that the Director may permit the use of a screen height of less than 50 feet, but not less than 35 feet, for steep-approach and short-landing procedures.

(2) When complying with the provisions of subregulation (1), the operator shall take account of -

(a) the runway surface condition and the type of runway surface;

(b) the runway slope in the direction of take-off; and

(c) the requirements referred to in regulation 121.08.9(2)(a) and (b).

(3) For dispatching the aeroplane in accordance with the provisions of subregulation (1), it shall be assumed that -

(a) such aeroplane will land on the most favourable runway, in still air; and

(b) such aeroplane will land on the runway most likely to be assigned considering the probable wind speed and direction and the ground handling characteristics of the aeroplane, and considering landing aids and terrain.

(4) If the operator is unable to comply with the provisions of subregulation 3(b) for the destination aerodrome, the aeroplane, may be dispatched if an alternate aerodrome is designated which permits full compliance with the provisions of subregulations (1), (2) and (3).

Landing on wet and contaminated runways

121.08.17 (1) The operator of a Class A or Class C aeroplane referred to in regulation 121.08.11, shall ensure that when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be wet, the landing distance available is at least 115 per cent of the required landing distance determined in accordance with the provisions of regulation 121.08.16.

(2) The operator shall ensure that, when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be contaminated, the landing distance available is at least the required approved landing distance.

(3) A landing distance on a wet runway shorter than the landing distance required by the provisions of subregulation (1), but not less than the landing distance required by the provisions of regulation 121.08.16(1), may be used if the aeroplane flight manual referred to in regulation 121.04.4, includes specified additional information on landing distances on wet runways.

DIVISION THREE : CLASS C AEROPLANE

General

121.08.18 (1) The operator of a Class C aeroplane shall ensure that, for determining compliance with the requirements prescribed in this Division, the approved performance data in the aeroplane flight manual referred to in regulation 121.04.4 is supplemented, as necessary, with other approved data if the approved performance data in such aeroplane flight manual are insufficient.

(2) A twin-engine Class C aeroplane which does not comply with the requirements prescribed in this Division for take-off and landing, shall be operated in accordance with the operating limitations prescribed in Division Two.

Take-off

121.08.19 (1) The operator of a Class C aeroplane shall ensure that the take-off mass of the aeroplane does not exceed the maximum certificated mass for the pressure altitude and the ambient temperature at the aerodrome at which the take-off is to be made.

(2) The operator shall ensure that, for a Class C aeroplane which has take-off field length data contained in the aeroplane flight manual referred to in regulation 121.04.4, which does not include engine-failure accountability, the distance from the start of the take-off roll required by the aeroplane to reach a height of 50 feet above the take-off surface with all engines operating within the maximum take-off power conditions specified, when multiplied by a factor of -

(a) 1.33 for aeroplanes having two engines;

(b) 1.25 for aeroplanes having three engines; or

(c) 1.18 for aeroplanes having four engines,

does not exceed the take-off run available at the aerodrome of departure.

(3) The provisions of regulation 121.08.4(2) and (3) shall apply *mutatis mutandis* when determining the maximum permitted take-off mass of the aeroplane at the aerodrome of departure.

Take-off flight path

121.08.20 (1) The operator of a Class C aeroplane shall ensure that the take-off flight path with one-engine-inoperative clears all obstacles by a vertical distance of at least 50 feet plus 0,01 x D, or by a horizontal distance of at least 90 m plus 0,125 x D, where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available.

(2) The take-off flight path referred to in subregulation (1), shall begin at a height of 50 feet above the take-off surface at the end of the take-off distance prescribed in regulation 121.08.19(2) or (3), as the case may be, and end at a height of 1 500 feet above the take-off surface.

(3) When complying with the provisions of subregulation (1), the operator shall take account of the requirements referred to in regulation 121.08.5(2) and the provisions of regulation 121.08.5(3), (4) and (5) shall apply *mutatis mutandis.*

(4) The operator shall establish contingency procedures to satisfy the requirements prescribed in this regulation in order to provide a safe route avoiding

obstacles to enable the aeroplane to land safely at the aerodrome of departure or at a take-off alternate aerodrome, if so required.

En-route with all engines operative

121.08.21 The operator of a Class C aeroplane to demonstrate that the aeroplane will, in the meteorological conditions expected for the flight, at any point on its route or on any planned diversion therefrom, be capable of a rate of climb of at least 300 feet per minute with all engines operating within the maximum continuous power conditions specified at -

(a) the minimum altitudes for safe flight on each stage of the route to be flown or of any planned diversion therefrom specified in, or calculated from, the information contained in the operations manual referred to in regulation 121.04.2; and

(b) the minimum altitudes necessary for compliance with the provisions of regulations 121.08.22 and 121.08.23, as the case may be.

En-route with one engine inoperative

121.08.22 (1) The operator of a Class C aeroplane shall demonstrate that the aeroplane will, in the meteorological conditions expected for the flight, in the event of any one engine becoming inoperative at any point on its route or on any planned diversion therefrom, and with the other engine or engines operating within the maximum continuous power conditions specified, be capable of continuing the flight to an aerodrome at which the aeroplane can comply with the provisions of regulation

121.08.25 or 121.08.26, as the case may be, clearing obstacles within 10 nautical miles either side of the intended track by a vertical interval of at least -

(a) 1 000 feet when the rate of climb is zero or greater; or

(b) 2 000 feet when the rate of climb is less than zero.

(2) The flight path shall have a positive slope at an altitude of 1 500 feet above the aerodrome where the landing is assumed to be made after the failure of one engine.

(3) For the purposes of this regulation the available rate of climb of the aeroplane shall be taken to be 150 feet per minute less than the rate of climb specified.

(4) When complying with the provisions of this regulation, the width margin specified in subregulation (1) may be reduced to 5 nautical miles if the required navigation accuracy can be achieved.

(5) Fuel jettisoning shall be permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

En route with two engines inoperative in the case of aeroplanes with three or more engines

121.08.23 (1) The operator of a Class C aeroplane with three or more engines, shall demonstrate that at no point along the intended track, such aeroplane is more than 90 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable

at the expected landing mass are complied with, unless the aeroplane complies with the provisions of subregulations (2) to (6) inclusive.

(2) The two-engines inoperative flight path data shall permit the aeroplane to continue the flight, in the expected meteorological conditions, clearing all obstacles within 5 nautical miles either side of the intended track by a vertical interval of at least 2 000 feet, to an aerodrome at which the performance requirements applicable at the expected landing mass, are complied with.

(3) The two engines shall be assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all-engines long-range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass, are complied with.

(4) The mass of the aeroplane at the point where the two engines are assumed to fail, shall not be less than the mass which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 1 500 feet directly over the landing area and thereafter to fly level for 15 minutes.

(5) For the purposes of this regulation, the available rate of climb of the aeroplane shall be taken to be 150 feet per minute less than the rate of climb specified.

(6) Fuel jettisoning shall be permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

Landing at destination and alternate aerodromes

121.08.24 The operator of a Class C aeroplane shall ensure that the landing mass of the aeroplane does not exceed the maximum certificated mass for the altitude and, if accounted for in the aeroplane flight manual referred to in regulation 121.04.4, the ambient temperature expected for the estimated time of arrival at the destination and alternate aerodrome.

Landing on dry runways

121.08.25 (1) The operator of a Class C aeroplane shall ensure that the landing mass of the aeroplane for the estimated time of arrival, allows a full stop landing from 50 feet above the threshold within 70 per cent of the landing distance available at the destination and any alternate aerodrome.

(2) When complying with the provisions of subregulation (1), the operator shall take account of the requirements referred to in regulation 121.08.16(2).

(3) For dispatching an aeroplane in accordance with the provisions of subregulation (1), it shall be assumed that -

(a) the aeroplane will land on the most favourable runway in still air; and

(b) the aeroplane will land on the runway most likely to be assigned considering the probable wind speed and direction and the ground handling characteristics of the aeroplane, and considering other conditions such as landing aids and terrain.

(4) If the operator is unable to comply with the provisions of subregulation (3)(b) for the destination aerodrome, the aeroplane may be dispatched if an alternate aerodrome is designated which permits compliance with the provisions of subregulations (1), (2) and (3).

Landing on wet and contaminated runways

121.08.26 (1) The operator of a Class C aeroplane shall ensure that, when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be wet, the landing distance available is at least 115 per cent of the required landing distance determined in accordance with the provisions of regulation 121.08.25.

(2) The operator shall ensure that, when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be contaminated, the landing distance available must be at least the required approved landing distance.

SUBPART 9

MAINTENANCE

General

121.09.1 The operator of a large commercial air transport aeroplane shall not operate the aeroplane unless such aeroplane is maintained in accordance with the regulations in Part 43.

Aeroplane maintenance schedule

121.09.2 (1) The operator of a large commercial air transport aeroplane shall ensure that the aeroplane is maintained in accordance with an aeroplane maintenance schedule established by the operator.

(2) The schedule shall contain details, including frequency, of all maintenance required to be carried out on the aeroplane.

(3) The schedule shall include a reliability programme if the Director determines that such a reliability programme is necessary.

(4) The aeroplane maintenance schedule referred to in subregulation (1) and any subsequent amendment thereof shall be approved by the Director.

Maintenance contracted out to an approved aircraft maintenance organisation

121.09.3 If maintenance on a large commercial air transport aeroplane is carried out by the holder of an aircraft maintenance organisation approval with the appropriate rating issued in terms of Part 145, the operator of the aeroplane shall ensure that all contracted maintenance is carried out in accordance with the regulations in Part 43.