



Civil Aviation Authority of Sri Lanka

# **PREPERATION AND CERTIFICATION OF OPERATIONS MANUAL**

➤ Guidance to Operators for preparation – Part A

**3<sup>rd</sup> Edition – January 2022**

Issued under the authority of the Director General of Civil Aviation and Chief Executive Officer



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# **PREPERATION AND CERTIFICATION OF OPERATIONS MANUAL**

**Operator & Industry Copy**



Guidance to Operators for preparation – Part A

**3<sup>rd</sup> Edition – January 2022**

Control Copy 01



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## RECORD OF REVISION

Deputy Director (Operations), Civil Aviation Authority, Sri Lanka is responsible to ensure that this manual is updated as required and to maintain the contents of the manual current at all times.

Amendments to this manual are promulgated by means of revisions issued whenever necessary to cover corrections and to add or modify the contents.

Any Revisions to the manual shall be shown with a vertical bar on the right side of the revised data. The page number and the revision number of the effected page must be changed accordingly. The list of effective pages and history of revisions page must be amended accordingly.

All revisions to this manual shall have the approval of the regulatory authority of this manual prior to publishing of the revisions.

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## HISTORY OF REVISIONS

Revision Number	Source	Areas Subject to change	Effective Date
2 <sup>nd</sup> Ed. Rev. 00	Improvement of the SLCAP 4500		21-05-2018
01	Improvement of the SLCAP 4500	Revision of Chapter 02	21-11-2021
3 <sup>rd</sup> Ed. Rev. 00	Improvement of the SLCAP 4500	Amend the manual to issue guidance to the industry for prepare the operation manual	13-01-2022



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## FOREWORD

Air transport in the world continues to be the safest mode of transport in the world, albeit it is the youngest, out of all other modes of transport. The world has been able to achieve this highest level of safety and witness many benefits today in air transport, mainly due to worldwide standardization of physical characteristics, configuration, material, personnel performance, and/or Standard Operating Procedures (SOP's) on matters pertaining to civil aviation.

Being members of the International Civil Aviation Organization (ICAO), each Contracting State has an obligation to the international community to ensure that civil aviation activities under its jurisdiction is being carried out in strict compliance with International Standards and Recommended Practices (SARP's) as specified in Annex 1 to Annex 19.

ICAO Annex 6 specifies that an Air Operator shall not engage in commercial air transport operations unless in possession of a valid Air Operator Certificate (AOC) issued by the Director General of the Civil Aviation Authority.

ICAO Annex 6 also specifies that the issuance of an air operator certificate by the Director General shall be dependent upon the operator demonstrating an adequate organization, method of control and supervision of flight operations, training program as well as ground handling and maintenance arrangements consistent with the nature and extent of the operations specified.

As per Annex 6, the State of the Operator is required to establish a procedure for both the certification and the continued surveillance of the operator to ensure that the required standards of operations are established prior to granting an AOC and are maintained continuously to a constant standard.

Preparation of an Operations Manual by the Operator for the use and guidance of Operations personnel and the approval / acceptance of the Operations manual by the State regulatory authority is a vital element of the certification and surveillance process. The operations Manual shall be compiled as part of the Flight Safety Document System.

The purpose of this manual is to provide guidance to the operators & industry personnel in preparation of the Operations Manual.

Any interpretation regarding the contents of this manual by Civil Aviation Authority, Sri Lanka shall be considered final.

In a vast growing industry and the advent of technological tools used in the preparation of manuals, it was necessary to revise the process (Revision 01) by which manuals are submitted by the industry, perused and discussed by the regulator and the streamlining of the regulatory guidance to the operator. This process has been changed to make it more expedient, efficient and effective.

The inclusion of methodologies that deal with amendments to manuals with minimal disruption, allowance for newer and more streamlined formats, more operator-regulator co-ordination and understanding of requirements has been the sole focus of this revision.

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Another retro-futuristic inclusion is the clear demarcation of content as per the requirements of varying authoritative institutions to which an operator is bound simultaneously. This has been done to assist both Operator, Regulator and end-user to understand the hierarchy and priority of certain requirements and the source of such requirements thereby eliminating ambiguity and misperception.

A handwritten signature in black ink, appearing to read 'Themiya', with a long horizontal stroke extending to the right.

Captain Themiya Abeywickrama  
Director General of Civil Aviation and Chief Executive Officer,  
Civil Aviation Authority of Sri Lanka



## ABBREVIATIONS

AC	Alternating current
ACAS	Airborne collision avoidance system
ADS	Automatic dependent surveillance
ADS-C	Automatic dependent surveillance — contract
AFCS	Automatic flight control system
AFM	Airplane Flight manual
AGA	Aerodromes, air routes and ground aids
AIG	Accident investigation and prevention
AIR	Airborne image recorder
AIRS	Airborne image recording system
AOC	Aeronautical operational control
AOC	Air operator certificate
APCH	Approach
APU	Auxiliary power unit
ASDA	Accelerate stop distance available
ASE	Altimetry system error
ASIA/PAC	Asia/Pacific
ASN	Aviation Safety Notice
ATC	Air traffic control
ATM	Air traffic management
ATN	Aeronautical Telecommunication Network
ATS	Air traffic services
AVSEC	Aviation Security
CAA	Civil Aviation Authority
CARS	Cockpit Audio Recording System
CAS	Calibrated airspeed
CAT I	Category I
CAT II	Category II
CAT III	Category III
CAT IIIA	Category IIIA



CAT IIIB	Category IIIB
CAT IIIC	Category IIIC
cm	Centimeter
Cm	Centimeter
CDL	Configuration deviation list
CFIT	Controlled flight into terrain
C of A	Certificate of Airworthiness
C of R	Certificate of Registration
CP	Cruise pilot
CPDLC	Controller-pilot data link communications
CSI	Cabin Safety Inspector
CVR	Cockpit voice recorder
CVS	Combined Vision System
DA	Decision altitude
DA/H	Decision altitude/height
DC	Device control
DCP	Designated Check Pilot
DFOI	Designated Flight Operation Inspector
DLR	Data link recorder
DLRS	Data link recording system
D-FIS	Data link-flight information services
DH	Decision height
DME	Distance measuring equipment
DSTRK	Desired track
ECAM	Electronic centralized aircraft monitor
EDTO	Extended diversion time operations
EFB	Electronic flight bag
EFIS	Electronic flight instrument system
EGT	Exhaust gas temperature
EICAS	Engine indication and crew alerting system
ELT	Emergency locator transmitter
ELT (AD)	Automatic deployable ELT
ELT (AF)	Automatic fixed ELT



ELT (AP)	Automatic portable ELT
ELT(S)	Survival ELT
EPR	Engine pressure ratio
ETOPS	Extended range operations by turbine-engine aeroplanes
EUROCAE	European Organization for Civil Aviation Equipment
EVS	Enhanced Vision Systems
FANS	Future air navigation system
FDAP	Flight data analysis programmes
FDAU	Flight data acquisition unit
FDR	Flight data recorder
FL	Flight level
FM	Frequency modulation
FOE	Flight Operations Expert
FOI	Flight Operations Inspector
FOO	Flight Operations Officer / Flight Dispatcher
ft	Foot
ft/min	Feet per minute
g	Normal acceleration
GCAS	Ground collision avoidance system
GNSS	Global navigation satellite system
GPWS	Ground proximity warning system
HUD	Head up display
hPa	Hectopascal
ICAO	International Civil Aviation Organization
IFR	Instrument flight rules
ILS	Instrument landing system
IMC	Instrument meteorological conditions
inHg	Inch of mercury
INS	Inertial navigation system
ISA	International standard atmosphere
kg	Kilogram
kg/m <sup>2</sup>	Kilogram per meter squared
km	Kilometer



km/h	Kilometer per hour
kt	Knot
kt/s	Knots per second
lb	Pound
Lbf	Pound-force
LDA	Landing distance available
LED	Light emitting diode
LOFT	Line Oriented Flight Training
m	Meter
Mb	Millibar
MCM	Maintenance Control Manual
MDA	Minimum descent altitude
MDA/H	Minimum descent altitude/height
MDH	Minimum descent height
MEL	Minimum equipment list
MFF	Mixed fleet flying
MHz	Megahertz
MLS	Microwave landing system
MMEL	Master minimum equipment list
MNPS	Minimum navigation performance specifications
MOPS	Minimum Operational Performance Specification
m/s	Meters per second
m/s <sup>2</sup>	Meters per second squared
N	Newton
N1	Low pressure compressor speed (two-stage compressor); fan speed (three-stage compressor)
N2	High pressure compressor speed (two-stage compressor); intermediate pressure compressor speed (three-stage compressor)
N3	High pressure compressor speed (three stage compressor)
NAV	Navigation
NM	Nautical mile
NVIS	Night vision imaging system
NOTAM	Notice to Airman



OCA	Obstacle clearance altitude
OCA/H	Obstacle clearance altitude/height
OCH	Obstacle clearance height
OEI	One engine inoperative
Ops Specs	Operations Specifications
PANS	Procedures for Air Navigation Services
PBC	Performance-based communication
PBN	Performance-based navigation
PBS	Performance-based surveillance
RCP	Required communication performance
Rev	Revision
RNAV	Area navigation
RNP	Required navigation performance
RP	Recommended Practice adopted by the Council which contracting States will Endeavour to conform in accordance with the Convention.
RSP	Required surveillance performance
RTCA	Radio technical commission for Aeronautics
RVR	Runway visual range
RVSM	Reduced vertical separation minima
SARPS	Standards and Recommended practices
SICASP	Secondary Surveillance Radar Improvements and Collision Avoidance Systems Panel
SOP	Standard operating procedures
SST	Supersonic transport
STD	Standards adopted by the Council which contracting States will conform in accordance with the Convention.
STOL	Short take-off and landing
SVS	Synthetic vision system
TAS	True airspeed
TAWS	Terrain awareness warning system
TCAS	Traffic alert and collision avoidance system
TLA	Thrust lever angle
TLS	Target level of safety



TODA	Take-off distance available
TORA	Take-off run available
TVE	Total vertical error
USOAP	Universal Safety Oversight Audit Program
UTC	Coordinated universal time
VFR	Visual flight rules
VD	Design diving speed
VMC	Visual meteorological conditions
VMC	Minimum control speed with the critical engine inoperative
VOR	VHF Omni directional radio range
VS0	Stalling speed or the minimum steady flight speed in the landing configuration
VS1	Stalling speed or the minimum steady flight speed in a specified configuration
VTOL	Vertical take-off and landing
WXR	Weather

*Symbols*

°C	Degrees Celsius
%	Per cent



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## DEFINITIONS

*Throughout this manual, the use of the male gender should be understood to include male and female persons.*

Following definitions shall apply to all users of this manual.

**Accelerate-stop distance available (ASDA).** The length of the take-off run available plus the length of stop way, if provided.

**Aerial work.** An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

**Aerodrome.** A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

**Aerodrome operating minima.** The limits of usability of an aerodrome for:

- a) Take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- b) Landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation;
- c) Landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H); and
- d) Landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.

**Aeroplane.** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

**Aircraft.** Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

**Aircraft operating manual.** A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

*Note. — The aircraft operating manual is part of the operations manual.*

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**Aircraft tracking.** A process, established by the operator, that maintains and updates, at standardized intervals, a ground-based record of the four dimensional position of individual aircraft in flight.

**Air operator certificate (AOC).** A certificate authorizing an operator to carry out specified commercial air transport operations.

**Air traffic service (ATS).** A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

**Airworthy.** The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

**Alternate aerodrome.** An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing.

Alternate aerodromes include the following:

*Take-off alternate.* An alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

*En-route alternate.* An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en route.

*ETOPS en-route alternate.* A suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing an engine shutdown or other abnormal or emergency condition while en route in an ETOPS operation.

*Destination alternate.* An alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

*Note.— The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.*

**Altimetry system error (ASE).** The difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

**Approach and landing operations using instrument approach procedures.** Instrument approach and landing operations are classified as follows.

**Non-precision approach and landing operations.** An instrument approach and landing which utilizes lateral guidance but does not utilize vertical guidance.

**Approach and landing operations with vertical guidance.** An instrument approach and landing which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.



*Precision approach and landing operations.* An instrument approach and landing using precision lateral and vertical guidance with minima as determined by the category of operation.

*Note.* — *Lateral and vertical guidance refers to the guidance provided either by:*

- a) A ground-based navigation aid; or*
- b) Computer generated navigation data.*

*Categories of precision approach and landing operations:*

*Category I (CAT I) operation.* A precision instrument approach and landing with:

- a) A decision height not lower than 60 m (200 ft); and*
- b) With either a visibility not less than 800 m or a runway visual range not less than 550 m.*

*Category II (CAT II) operation.* A precision instrument approach and landing with:

- a) A decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft); and*
- b) A runway visual range not less than 300 m.*

*Category IIIA (CAT IIIA) operation.* A precision instrument approach and landing with:

- a) A decision height lower than 30 m (100 ft) or no decision height; and*
- b) A runway visual range not less than 175 m.*

*Category IIIB (CAT IIIB) operation.* A precision instrument approach and landing with:

- a) A decision height lower than 15 m (50 ft), or no decision height; and*
- b) A runway visual range less than 175 m but not less than 50 m.*

*Category IIIC (CAT IIIC) operation.* A precision instrument approach and landing with no decision height and no runway visual range limitations.

*Note.*— *Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach and landing operation would be conducted in accordance with the requirements of the most demanding category (e.g. an operation with a DH in the range of CAT IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation).*

*Note 2.* — *The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach operation, the required visual reference is the runway environment.*

*Note 3.* — *Guidance on approach classification as it relates to instrument approach operations, procedures, runways and navigation systems is contained in the Manual of All-Weather Operations (Doc 9365).*



**Area navigation (RNAV).** A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

*Note. — Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.*

**COMAT.** Operator material carried on an operator's aircraft for the operator's own purposes.

**Combined vision system (CVS).** A system to display images from a combination of an enhanced vision system (EVS) and a synthetic vision system (SVS).

**Cabin crew member.** A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew.

**CAS (calibrated airspeed).** The calibrated airspeed is equal to the airspeed indicator reading corrected for position and instrument error. (As a result of the sea level adiabatic compressible flow correction to the airspeed instrument dial, CAS is equal to the true airspeed (TAS) in Standard Atmosphere at sea level.)

**Commercial air transport operation.** An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

**Configuration deviation list (CDL).** A list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

**Continuing airworthiness.** The set of processes by which all aircraft comply with the applicable airworthiness requirements and remain in a condition for safe operation throughout their operating life.

**Continuous descent final approach (CDFA).** A technique, consistent with stabilized approach procedures, for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare maneuver should begin for the type of aircraft flown.

**Crew member.** A person assigned by an operator to duty on an aircraft during a flight duty period.

**Cruise pilot.** A flight crew who is assigned to perform pilot tasks during cruise flight, to allow the pilot in- command or a co-pilot to obtain planned rest.

**Cruising level.** A level maintained during a significant portion of a flight.

**Dangerous goods.** Articles or substances which are capable of posing a hazard to health, safety, property or the environment and which are shown in the list of dangerous goods in

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these Instructions, or which are classified according to ICAO Dangerous Goods Technical Instruction.

Note — Dangerous goods are classified in Annex 18, and Implementing standard 009

**Decision altitude (DA) or decision height (DH).** A specified altitude or height in the precision approach or approach with vertical guidance at which a missed approach must be Initiated if the required visual reference to continue the approach has not been established.

*Note 1. — Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.*

*Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.*

*Note 3. — For convenience where both expressions are used they may be written in the form “decision altitude/ height” and abbreviated “DA/H”.*

**Declared temperature.** A temperature selected in such a way that when used for performance purposes, over a series of operations, the average level of safety is not less than would be obtained by using official forecast temperatures.

**Duty.** Any task that flight or cabin crew members are required by the operator to perform, including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue.

**Duty period.** A period which starts when a flight or cabin crew member is required by an operator to report for or to commence a duty and ends when that person is free from all duties.

**EDTO critical fuel.** The fuel quantity necessary to fly to an en-route alternate aerodrome considering, at the most critical point on the route, the most limiting system failure.

Note — Attachment C of Annex 6 part 1 contains guidance on EDTO critical fuel scenarios.

**EDTO significant system.** An aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion.

**Electronic flight bag (EFB).** An electronic information system, comprised of equipment and applications for flight crew, which allows for the storing, updating, displaying and processing of EFB functions to support flight operations or duties.

**Emergency locator transmitter (ELT).** A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

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**Automatic fixed ELT (ELT (AF)).** An automatically activated ELT which is permanently attached to an aircraft.

**Automatic portable ELT (ELT (AP)).** An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

**Automatic deployable ELT (ELT (AD)).** An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.

**Survival ELT (ELT(S)).** An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

**Engine.** A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable).

**Enhanced vision system (EVS).** A system to display electronic real-time images of the external scene achieved through the use of image sensors.

Note — EVS does not include night vision imaging systems (NVIS).

**Extended diversion time operations (EDTO).** Any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the State of the Operator.

**Expected.** Used in relation to various aspects of performance (e.g. rate or gradient of climb), this term means the standard performance for the type, in the relevant conditions (e.g. mass, altitude and temperature).

**Fatigue.** A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness and/or physical activity that can impair a crew member's alertness and ability to safely operate an aircraft or perform safety related duties.

**Fatigue Risk Management System (FRMS).** A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.

**Final approach segment (FAS).** That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

**Flight crew.** A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

**Flight data analysis.** A process of analysing recorded flight data in order to improve the safety of flight operations.

**Flight duty period.** A period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aeroplane finally comes to rest and the engines are shut down at the end of the last flight on which he is a crew member.

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**Flight manual.** A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crews for the safe operation of the aircraft.

**Flight operations officer / flight dispatcher.** A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with CAA Sri Lanka requirements, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

**Flight plan.** Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

**Flight recorder.** Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

*Crash protected flight recorders comprise four systems; 1. A flight data recorder (FDR) 2. A cockpit voice recorder (CVR) 3. An airborne image recorder (AIR) 4. Data link recorder (DLR).*

**Flight safety documents system.** A set of interrelated documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

**Flight simulation training device.** Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

*A flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crews, and the performance and flight characteristics of that type of aircraft are realistically simulated;*

*A flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;*

*A basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.*

**Flight time — aeroplanes.** The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

*Note.— Flight time as here defined is synonymous with the term “block to block” time or “chock to chock” time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight.*

**General aviation operation.** An aircraft operation other than a commercial air transport operation or an aerial work operation.

**Ground handling.** Services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services.



**Grooved or porous friction course runway.** A paved runway that has been prepared with lateral grooving or a porous friction course (PFC) surface to improve braking characteristics when wet.

**Head-up display (HUD).** A display system that presents flight information into the pilot's forward external field of view.

**Height.** The vertical distance of a level, a point, or an object considered as a point, measured from a specified datum.

*Note. — For the purposes of this example, the point referred to above is the lowest part of the aeroplane and the specified datum is the take-off or landing surface, whichever is applicable.*

**Human Factors principles.** Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

**Human performance.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

**Instrument approach operations.** An approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

- a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; and
- b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

*Note. — Lateral and vertical navigation guidance refers to the guidance provided either by:*

- (i) a ground-based radio navigation aid; or
- (ii) Computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

**Instrument approach procedure (IAP).** A series of predetermined maneuvers 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. Instrument approach procedures are classified as follows:

**Non-precision approach (NPA) procedure.** An instrument approach procedure designed for 2D instrument approach operations Type A.

*Note. — Non-precision approach procedures may be flown using a continuous descent final approach (CDFA) technique. CDFAs with advisory VNAV guidance calculated by on-board equipment (see PANS-OPS (Doc 8168), Volume I, Part I, Section 4, Chapter 1, 1.8.1) are considered 3D instrument approach operations. CDFAs with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more*



information on CDFAs, refer to PANS-OPS (Doc 8168), Volume I, Part I, Section 4, Chapter 1, 1.7 and 1.8.

**Approach procedure with vertical guidance (APV).** A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

**Precision approach (PA) procedure.** An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS CAT I) designed for 3D instrument approach operations Type A or B.

Note1 — Refer to IS 013, 2.8.3 for instrument approach operation types.

**Instrument meteorological conditions (IMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling (As defined in ICAO Annex 2), less than the minima specified for visual meteorological conditions.

*Note. — The specified minima for visual meteorological conditions are contained in Chapter 4 of ICAO Annex 2.*

**Isolated aerodrome.** A destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.

**Landing distance available (LDA).** The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

**Landing surface.** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft landing in a particular direction.

**Large aeroplane.** An aeroplane of a maximum certificated take-off mass of over 5 700 kg.

**Maintenance.** The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

**Maintenance organization's procedures manual.** A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

**Maintenance program.** A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability program, necessary for the safe operation of those aircraft to which it applies.

**Maintenance release.** A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures manual or under an equivalent system.

**Master minimum equipment list (MMEL).** A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design, containing items, one or more of which is permitted to be unserviceable at the

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commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

**Maximum mass.** Maximum certificated take-off mass.

**Maximum diversion time.** Maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome.

**Minimum descent altitude (MDA) or minimum descent height (MDH).** A specified altitude or height in a non-precision approach or circling approach below which descent must not be made without the required visual reference.

*Note 1. — Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.*

*Note 2. — The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.*

*Note 3. — For convenience when both expressions are used they may be written in the form “minimum descent altitude/ height” and abbreviated “MDA/H”.*

**Minimum equipment list (MEL).** A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.

**Navigation specification.** A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

**Required navigation performance (RNP) specification.** A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

**Area navigation (RNAV) specification.** A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

*Note 1. — The Performance-based Navigation (PBN) Manual (ICAO Doc 9613), Volume II, contains detailed guidance on navigation specifications.*

*Note 2. — The term RNP, previously defined as “a statement of the navigation performance necessary for operation within a defined airspace”, has been removed from ICAO Annex 6, as the concept of RNP has been overtaken by the concept of PBN. The term RNP in this Annex is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements,*

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including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in ICAO Doc 9613.

**Net gradient.** The net gradient of climb throughout these requirements is the expected gradient of climb diminished by the maneuver performance (i.e. that gradient of climb necessary to provide power to maneuver) and by the margin (i.e. that gradient of climb necessary to provide for those variations in performance which are not expected to be taken explicit account of operationally).

**Night.** The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority.

*Note. — Civil twilight ends in the evening when the center of the sun's disc is 6 degrees below the horizon and begins in the morning when the center of the sun's disc is 6 degrees below the horizon.*

**Obstacle clearance altitude (OCA) or obstacle clearance height (OCH).** The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable used in establishing compliance with appropriate obstacle clearance criteria.

*Note 1. — Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.*

*Note 2. — For convenience when both expressions are used they may be written in the form "obstacle clearance altitude/ height" and abbreviated "OCA/H".*

**Operational control.** The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

**Operational flight plan.** The operator's plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned.

**Operations manual.** A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

**Operations specifications.** The authorizations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

**Operator.** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

**Operator's maintenance control manual.** A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

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**Performance-based communication (PBC).** Communication based on performance specifications applied to the provision of air traffic services.

*Note.—* An RCP specification includes communication performance requirements that are allocated to system components in terms of the communication to be provided and associated transaction time, continuity, availability, integrity, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

**Performance-based navigation (PBN).** Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

*Note.—* Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

**Pilot-in-command.** The pilot designated by the operator, or in the case of general aviation, command and charged with the safe conduct of a flight.

**Point of no return.** The last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en-route alternate aerodrome for a given flight.

**Pressure-altitude.** An atmospheric the owner, as being in pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere (as defined in ICAO Annex 8).

**Psychoactive substances.** Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psych stimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

**Reference humidity.** The relationship between temperature and reference humidity is defined as follows:

- At temperatures at and below ISA, 80 per cent relative humidity,
- At temperatures at and above ISA + 28° C, 34 per cent relative humidity,
- At temperatures between ISA and ISA + 28° C, the relative humidity varies linearly between the humidity specified for those temperatures.

**Repair.** The restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear.

**Required communication performance (RCP).** A statement of the performance requirements for operational communication in support of specific ATM functions.



**Required communication performance type (RCP type).** A label (e.g. RCP 240) that represents the values assigned to RCP parameters for communication transaction time, continuity, availability and integrity.

**Required surveillance performance (RSP) specification.** A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

**Rest period.** A continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

**Runway surface condition.** The state of the surface of the runway: either dry, wet, or contaminated:

- a) *Contaminated runway.* A runway is contaminated when more than 25 per cent of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by:
  - water, or slush more than 3 mm (0.125 in) deep;
  - loose snow more than 20 mm (0.75 in) deep; or
  - compacted snow or ice, including wet ice.
- b) *Dry runway.* A dry runway is one which is clear of contaminants and visible moisture within the required length and the width being used.
- c) *Wet runway.* A runway that is neither dry nor contaminated.

*Note1. — In certain situations, it may be appropriate to consider the runway contaminated even when it does not meet the above definition. For example, if less than 25 per cent of the runway surface area is covered with water, slush, snow or ice, but it is located where rotation or lift-off will occur, or during the high speed part of the take-off roll, the effect will be far more significant than if it were encountered early in take-off while at low speed. In this situation, the runway should be considered to be contaminated.*

*Note 2.— Similarly, a runway that is dry in the area where braking would occur during a high speed rejected take-off, but damp or wet (without measurable water depth) in the area where acceleration would occur, may be considered to be dry for computing take-off performance. For example, if the first 25 per cent of the runway was damp, but the remaining runway length was dry, the runway would be wet using the definitions above. However, since a wet runway does not affect acceleration, and the braking portion of a rejected take-off would take place on a dry surface, it would be appropriate to use dry runway take-off performance.*

**Runway visual range (RVR).** The range over which the pilot of an aircraft on the center line of a runway can see the runway surface markings or the lights delineating the runway or identifying its center line.

**Safe forced landing.** Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.



**Safety management system (SMS).** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**Safety program.** An integrated set of regulations and activities aimed at improving safety.

**Small aeroplane.** An aeroplane of a maximum certificated take-off mass of 5 700 kg or less.

**State of Registry.** The State on whose register the aircraft is entered.

*Note. — In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).*

**State of the Aerodrome.** The State in whose territory the aerodrome is located.

**State of the Operator.** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

**Synthetic vision system (SVS).** A system to display data-derived synthetic images of the external scene from the perspective of the flight deck.

**Target level of safety (TLS).** A generic term representing the level of risk which is considered acceptable in particular circumstances.

**Serious injury.** An injury which is sustained by a person in an accident and which:

- a) Requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) Results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) Involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage; or
- d) Involves injury to any internal organ; or
- e) Involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) Involves verified exposure to infectious substances or injurious radiation.

**Take-off distance available (TODA).** The length of the takeoff run available plus the length of the clearway, if provided.

**Take-off run available (TORA).** The length of runway declared available and suitable for the ground run of an aeroplane taking off.



**Take-off surface.** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking off in a particular direction.

**Target level of safety (TLS).** A generic term representing the level of risk which is considered acceptable in particular circumstances.

**Threshold time.** The range, expressed in time, established by the State of the Operator, to an en-route alternate aerodrome, whereby any time beyond requires an EDTO approval from the State of the Operator.

**TAS (True airspeed).** The speed of the aeroplane relative to undisturbed air.

**Total vertical error (TVE).** The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level).

**Visual meteorological conditions (VMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling (as defined in ICAO Annex 2), and equal to or better than specified minima.

*Note. — The specified minima are contained in Chapter 4 of ICAO Annex 2.*



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## SECTION 1 INTRODUCTION

### 1.1 ICAO DEFINITION OF OPERATIONS MANUAL

#### 1.1.1 Operations Manual.

A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

### 1.2 APPLICABLE ICAO STANDARDS AND RECOMMENDED PRACTICES (SARPS)

Extract from, – IS-013, 2.3

#### Standard 2.3 Operations Manual

Standard 2.3.1 an operator shall provide, for the use and guidance of operations personnel concerned, an Operations Manual in accordance with Preparation and Certification of Operations manual, (SLCAP 4500). Organization and contents of the Operations Manual shall be according to Appendix 3 of this IS. The Operations Manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date. All such amendments or revisions shall be issued to all personnel that are required to use this manual.

Standard 2.3.2 An operator shall forward to the DGCA a copy of the Operations Manual together with all amendments and/or revisions, for review and acceptance and, where required, approval. The operator shall incorporate in the Operations Manual such mandatory material as the DGCA may require.

### 1.3 THE RESPONSIBILITY OF THE OPERATOR

1.3.1. The operator has the responsibility for the safe conduct of operations and for compliance with any laws or regulations published by the DGCA.

1.3.2. These laws and regulations, which are the means by which the Civil Aviation Authority, Sri Lanka implements the provisions of the ICAO Annexes, are not in themselves sufficient to provide the operator with comprehensive and detailed instructions on which to base an operation.

1.3.3. The responsibility for the development of operating instructions necessary for the safety, regularity and efficiency of an operation therefore rests upon the operator.

1.3.4. These operating instructions must not conflict with the laws and regulations of Civil Aviation Authority, Sri Lanka or those of other States into or over which operations are conducted.

1.3.5. The primary means used by an operator to promulgate these operating instructions are the Operations Manual and the Maintenance Control Manual.

1.3.6. Through the Operations Manual the operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole.

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## 1.4 RESPONSIBILITY OF THE INSPECTOR

*RESERVED*

## 1.5 OPERATIONS MANUAL

1.5.1 All applicants for an Air Operator Certificate (to be issued in accordance with IS-013)) from Civil Aviation Authority, Sri Lanka shall prepare an Operations Manual as per Instructions given in this manual.

1.5.2 Present holders of Air Operator Certificates from Civil Aviation Authority, Sri Lanka shall revise their existing Operations Manuals as per Instructions given in SLCAP 4500 within a period of three months.

## 1.6 CHECK LISTS

*RESERVED*



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## SECTION 2 GENERAL RULES FOR THE PREPARATION OF OPERATIONS MANUAL

### 2.1 GENERAL RULES

- 2.1.1. The Operator will be required to submit to Civil Aviation Authority of Sri Lanka the Operations Manual hard-copy or the soft-copy thereof at the time of the submission of the Formal application.
- 2.1.2. The Civil Aviation Authority, Sri Lanka Inspector should inform the Operator a reasonable time frame that will be needed to evaluate the adequacy of the Operations Manual.
- 2.1.3. The CAASL Inspectors shall keep a flexible system of editing and work with the Operator/Applicant to achieve the desired result of regulatory conformity within a reasonable time.
- 2.1.4. It is advisable that Operators/Applicants follow the same order of contents as the SLCAP 4500. If an Operator/Applicant is deviating from the 4500 by using a different heading, title, terminology etc... it must be indicated in the manual by way of reference to the relevant SLCAP sections;
- i.e. An Operator uses the company designation of 'Vice-President (Flt-Ops) for the person who will fulfil the role of the nominated post-holder indicated as Director Flight Operation is this SLCAP 4100 and 4500. The manual will have the following cross-reference:

*Qualifications of Vice- President (Flight Operations Division)*

*[Ref: SLCAP 4500 Appendix 1 (2.2) Director Flight Operations]*

### 2.2 MANUAL STANDARDS

- 2.2.1. The Operations Manuals prepared by an applicant may be in a format which adequately meets the requirements of the CAASL standards for manuals and the information content.
- 2.2.2. It is strongly recommended that an Operator/Applicant maintain a uniform format for all their company manuals which are to be submitted to the CAASL.
- 2.2.3. An operator may also take guidance from the CAASL manual format as set out in SLCAP 5300, ICAO or EASA compliant formats.



## 2.3 HEADERS & FOOTERS:

2.3.1. Operators Manuals must have the following information clearly on each page of text in an authorized manual:

- (i) Company Logo
- (ii) Name of the Manual
- (iii) Relevant Reference or Chapter of the manual (if applicable)
- (iv) Edition/Issue Number
- (v) Date of Effectiveness (of the individual page)
- (vi) Page number

2.3.2. The operator may choose to have the above information on the header and/or the footer of the page, provided that reference is clear and acceptable to the CAASL.

## 2.4 REFERENCES & SEPARATION OF REQUIREMENTS

References to Regulatory Documents or Company documents should be clear and easily identifiable to the reader.

2.4.1. Requirements of the CAASL:

When an Operator or Applicant enters content into a manual which has a direct reference to a pre-requisite or mandatory requirement from a CAASL Regulation, Standard or Directive, these should be stated as such under an appropriate sub-heading; *“Regulatory Requirements:”*

2.4.2. Requirements of other bodies to which the Operator is obliged:

If the Operator/Applicant is required to enter content into a manual which is a requirement by another regulatory or auditing body, but which is not covered by the CAASL Regulations, these should be stated clearly under an appropriate sub-heading such as; *“IOSA Audit Requirements”*, or *“IATA Audit Requirements”* or *“CAA Singapore Requirement”* etc.. The reason for this separation is so that it is very clear to the Regulator, the Operator and any person conducting an Audit as to the purpose of the content and the requirement for which it was drafted. When an operator submits content, based on such a requirement, the original documentation, report, or finding must be submitted to the Regulator, for such content to be approved, provided, there is no contradiction between this requirement and the Regulatory requirements.

2.4.3. Requirements of the Operator (Company Policies):

If either or any of the Sub-Titles above are used, then the remainder should be stated under the appropriate sub-heading of *“Company Policy”* or *“Company Requirements”*. The operator/applicant must take due care to ensure that there is no conflict between the Company Policy/Requirements and the preceding Regulatory and/or Auditing requirements.

2.4.4. References to other documents or Manual of the Operator:

If there is a reference to the contents of another manual, it is recommended that such manual reference be clear and precise without excessive detail thereby removing the



necessity for dualistic amendments. It is recommended that such references be done with caution as the documents referred to will therefore require CAASL approval.

## 2.5 AMENDMENTS & CHANGES

This part covers the actions between the Operator and the CAASL, when a new Revision/amendment, or Edition/Issue of a manual is required. This requirement arises when there is a significant changes to the operation and/or a change in regulatory requirements.

- 2.5.1. The Operator should submit an editable document as a 'summary of change' or 'change log' to the CAASL to peruse. This will be Draft 001 or Draft 001A etc...
- 2.5.2. The CAASL Inspector(s) should make comments, highlight, or draft suggested amendments for the Operator in order to facilitate compliance and regularity. This will then be returned to the Operator with necessary comments on the document itself. This will be Draft 002 or Draft 002A etc... (This prevents confusion as the odd numbers are from the Operator to the CAASL and even numbers are from the CAASL to the Operator)

This process should continue in the best method possible available at the time, taking into account the evolution in technology and logistics.

- 2.5.3. Once all the changes/amendments have been granted permission by the CAASL, the Operator shall use the finalized versions of the amendments on the Summary of Change document(s) and prepare the Draft Proof Pages of the proposed Revision to the manual.
- 2.5.4. The Draft Proof Pages should be sent with the correct formatting as per the manual and any minor corrections if needed must be made. The CAASL, if satisfied will give authorization for the Final Drafts.
- 2.5.5. Once the Final Drafts have been approved, only those pages as approved are to be printed and sent to the CAASL for authorization and the CAASL stamp/seal. This includes any intentionally left blank pages. Once these amendments to the Master Copy are approved, these amendments must be inserted into all official copies issued by the operator.

## 2.6 PAGE NUMBER CHANGES

- 2.6.1. If content has been deleted, the space that is generated should be kept blank and the words "*Intentionally left blank*" be left in that page.

*i.e. if content to the equivalence of 4 pages has been removed from Page 95, 96, 97 and 98, then those pages should be marked as "**intentionally left blank**" so that the page numbers continue in sequence without disruption to the remainder of the document.*

- 2.6.2. If content has been added, the resulting pages should be marked in the form of an Alpha-numeric whereby the pages on which content has not been changed, remain unaffected.



i.e. If the contents to the equivalence of 5 pages have been added to page 110, these will become page 110A, 110B, 110C, 110D. This way Page 111 remains unchanged.

Note: When a further amendment to the manual is done which affects pages “intentionally left blank” or those which are Alpha-numerical, the Operator is to avoid further confusion by adopting practical changes without disrupting the entire document and submit such amendments for CAASL approval.

Note: It is recommended that at the end of each chapter, where the Operator may anticipate developments and future changes, a few blank pages be added with page numbering and the remark, “intentionally left blank” as this assists in chapter expansion with no disruption to the subsequent chapters.

## 2.7 TEMPORARY CHANGES

2.7.1. If temporary changes are required to be inserted due to operational reasons, such pages must be submitted for approval and following approval shall be inserted into the manual where necessary provided that:

- a) The page is of a different color to the remainder of the manual
- b) The page is indicated as ‘TEMPORARY’ in a prominent manner
- c) The page displays the effective dates/expiration date of affectivity

## 2.8 REQUIREMENT FOR CAASL STAMP ON MASTER COPY

2.8.1 The final approved Master Copy (two hard copies) of a manual shall be stamped on each page by the CAASL.

2.8.2 The Operator may utilize unstamped copies (even in electric format) provided that they are based upon the Approved and Stamped Master Copy with no alterations or omissions or additions to the approved text.

2.8.3 For manuals which are available only in electronic form, an approved version must remain with the CAASL for record purposes. A documents certifying the approved version must be obtained by the Operator prior to any document dissemination.

2.8.4 In the event of any conflict or interpretation, the Master Copy in the possession of the CAASL shall be deemed as the legally accepted document and the CAASL’s interpretation of the contents shall be final.

## 2.9 OFFENCES & VIOLATIONS

2.9.1. Any operator who attempts to mislead or alter an approved version of a page without the consent of the CAASL in writing is an offence which shall be punishable under the provisions of the Civil Aviation Act, No. 14 of 2010.

2.9.2. Any operator who uses or causes to be used or allows the usage of any unauthorized page of a manual which differs from that Master Copy which has been stamped and authorized by the CAASL is an offence and shall be punishable under the Civil Aviation Act, No. 14 of 2010.



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2.9.3. The Accountable Manager shall be responsible and maintain a record of periodic review (every 02 years) of the FOM for the purpose of evolving changes and updates.

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## SECTION 3 ADMINISTRATION OF THE OPERATIONS MANUAL

### 3.1 PREPERATION OF OPERATIONS MANUAL

- 3.1.1. An operator shall provide, for the use and guidance of operations personnel concerned, an Operations Manual in accordance with guidance material provided in this manual.
- 3.1.2. An operator shall ensure that the contents of the Operations Manual, including all amendments or revisions, do not contravene the conditions contained in the Air Operator Certificate (AOC) / Operations Specifications or any applicable regulations and are acceptable to, or, where applicable, approved by, the Authority.
- 3.1.3. An operator shall ensure that the Operations Manual contains all instructions and information necessary for operations personnel to perform their duties.
- 3.1.4. An operator must ensure that information taken from approved documents, and any amendment of such approved documentation, is correctly reflected in the Operations Manual and that the Operations Manual contains no information contrary to any approved documentation. However, this requirement does not prevent an operator from using more conservative data and procedures.
- 3.1.5. The operator shall incorporate in the Operations Manual such mandatory material as the DGCA may require.
- 3.1.6. Unless otherwise approved by the DGCA, an operator must prepare the Operations Manual in the English language. Ref – IS 015, General, 1.2
- 3.1.7. An operator may issue an Operations Manual in separate volumes.
- 3.1.8. An operator must ensure that the contents of the Operations Manual are presented in a form in which they can be used without difficulty. The design of the Operations Manual shall observe human factors principles.

### 3.2 MASTER MANUALS

- 3.2.1. The operator shall provide Civil Aviation Authority, Sri Lanka with two master copies of the Operations Manual, for review and acceptance and, where required, approval.
- 3.2.2. One Master copy of the Operations Manual will be kept at Civil Aviation Authority, Sri Lanka and the other shall be given to the Operator after the required Approval / Acceptance action by Civil Aviation Authority, Sri Lanka.
- 3.2.3. The Operations Manual at Civil Aviation Authority, Sri Lanka shall be considered the primary master manual. The Inspectors from Civil Aviation Authority, Sri Lanka shall be guided by the contents of the primary master manual kept at Civil Aviation Authority, Sri Lanka for the purposes of audits / inspections and for interpretation during any regulatory functions / enforcement actions.
- 3.2.4. It is the responsibility of the Operator to ensure that Master Operations Manual at Civil Aviation Authority, Sri Lanka is kept up to date.

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3.2.5. Apart from the two master Operations Manuals the Operator shall supply an agreed number of copies of the Operations Manual to Civil Aviation Authority, Sri Lanka for distribution among Authority Inspectors. It is the responsibility of the operator to keep all manuals at Civil Aviation Authority, Sri Lanka up to date.

### **3.3 AMENDMENTS / REVISIONS TO OPERATIONS MANUAL**

3.3.1. The Operations Manual (Part A, B, C, D) shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date.

3.3.2. The Operations manual also must contain a statement as to which person of the Operator is responsible for the contents of the Operations Manual (Part A, B, C, D) and for liaising with Civil Aviation Authority, Sri Lanka in respect of amendments and revisions to the manual.

3.3.3. The delegated person of the Operator who is responsible for the contents of the Operations Manual (as per paragraph 3.3.2) shall also be responsible to keep the Master Operations Manual (Part A, B, C, D) at Civil Aviation Authority, Sri Lanka and all other manuals at the Authority up to date.

3.3.4. An operator shall supply the Civil Aviation Authority, Sri Lanka with intended amendments and revisions in advance of the effective date. Sufficient time must be given to Civil Aviation Authority, Sri Lanka to take appropriate action as necessary (refer to Chapter 4).

3.3.5. When immediate amendments or revisions are required in the interest of safety, they may be published with the verbal approval of the DGCA. In such an instance the amendment must be forwarded to DGCA within 30 days.

3.3.6. An operator shall incorporate all amendments and revisions required by the Civil Aviation Authority, Sri Lanka.

3.3.7. The operator shall ensure that all operators' relevant personnel are made aware of changes to the Operations Manual that are relevant to their duties without any delay.

3.3.8. All amendments or revisions shall be issued to all personnel who are holders of a copy of the Operations Manual.

3.3.9. All such amendments to the Operations Manual may be in hard copy or E-copy

### **3.4 ACCESS TO OPERATIONS MANUAL**

3.4.1. An operator shall ensure that all operations personnel have easy access to a copy of each part of the Operations Manual which is relevant to their duties. In addition, the operator shall supply crew members with a personal copy of, Parts A and B of the Operations Manual for personal study.

3.4.2. Each holder of an Operations Manual, or appropriate parts of it, shall keep it up to date with the amendments or revisions supplied by the operator.

3.4.3. Users of Operations Manual should be encouraged to make comments on their contents. In particular, when errors in Operational information is discovered, reports



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should be made immediately to the person charged with the amendments of the Operations manual (refer paragraph 3.3.2).

3.4.4. Users also should be encouraged to comment on the general presentation of information in the manual and to suggest other subjects that should be addressed.

### 3.5 AIRCRAFT COPY

3.5.1. The Operator shall ensure that a current copy of the Operations Manual is carried in each aircraft during flight, and a copy is available at each Flight Control Center and at each line station. A copy in the EFB satisfies this requirement.

3.5.2. Operator shall appoint a person to be responsible for revisions / amendments to Operations Manual kept in each aircraft. Including the one in the EFB.



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## SECTION 4 REQUIRED TECHNICAL SAFETY EVALUATIONS

### 4.1 APPROVAL AND ACCEPTANCE ACTIONS

- 4.1.1. The Certification and Continued Surveillance of an air operator includes actions taken by the DGCA on matters submitted for its review.
- 4.1.2. The actions are categorized as approvals or acceptances depending on the nature of the response by Civil Aviation Authority, Sri Lanka to the matter submitted for its review.
- 4.1.3. An approval is an active response by the DGCA to a matter submitted for its review. An approval constitutes a finding or determination of compliance with the applicable standards.
- 4.1.4. An approval will be evidenced by the signature of the approving official, the issuance of a document or certificate, or some other formal action taken by the DGCA.
- 4.1.5. An acceptance does not necessarily require an active response by Civil Aviation Authority, Sri Lanka to a matter submitted for its review. Civil Aviation Authority, Sri Lanka may accept a matter submitted to it for review as being in compliance with the applicable standards if Civil Aviation Authority, Sri Lanka does not specifically reject all or a portion of the matter under review, usually after some defined period of time after submission.
- 4.1.6. The defined period of time is three months from the day of submission of the document.
- 4.1.7. Technical Safety Evaluation (*RESERVED*)

### 4.2 DEMONSTRATIONS BEFORE ISSUANCE OF APPROVALS

*RESERVED*

### 4.3 RECORDING OF CERTIFICATION ACTION

- 4.3.1. All approval and acceptance actions shall be adequately documented. The established procedures of Civil Aviation Authority, Sri Lanka shall be used or Check lists provided for the purpose shall be used.
- 4.3.2. These written instructions shall be retained as long as the operator continues to exercise the authorizations for which the approval or acceptance action was issued and thereafter as per Office procedures of Civil Aviation Authority, Sri Lanka.

### 4.4 COORDINATION OF OPERATIONS AND AIRWORTHINESS EVALUATIONS

*Note (extract form ICAO Annex 6, Attachment D, Paragraph 2.4)*

*Some of the references to approval or acceptance in Annex 6, Part I, will require an operations evaluation and an airworthiness evaluation. Low minima approvals for the*

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*conduct of Category II and III ILS approaches, for example, require coordinated prior evaluation by operations and airworthiness specialists. Flight operations specialists should evaluate the operational procedures, training and qualifications. Airworthiness specialists should evaluate the aircraft, equipment reliability and maintenance procedures. These evaluations may be accomplished separately, but should be coordinated to ensure that all aspects necessary for safety have been addressed before any approval is issued.*

- 4.4.1. For approvals and acceptance where Operations and Airworthiness evaluations are required such acceptance or approvals shall be issued only in coordination with Inspectors' of Operations and Airworthiness section.

#### 4.5 APPROVAL ACTIONS

*RESERVED*

##### 4.5.1. RESERVED

##### 4.5.2. Provisions that require an approval

**The following provisions require approval by the DGCA.**

- (a) Configuration Deviation List (CDL)  
(Refer to SLCAP 4500 Section 7, OM Part B Chapter 8)  
Approval from State of design will be accepted.  
Operators should comply with any requirements issued by Civil Aviation Authority, Sri Lanka and/or State of Design /Manufacture.

Amendments to the CDL approved by country of design/manufacture will be incorporated.

- (b) Master Minimum Equipment List (MMEL);  
(Refer to SLCAP 4500 Section 7, OM Part B Chapter 9)  
Approval from State of design will be accepted.  
Operators should comply with any requirements issued by Civil Aviation Authority, Sri Lanka and/or State of Design.

Amendments to the MMEL approved by country of design/manufacture will be incorporated.

- (c) The method for establishing Minimum Flight Altitudes (Ref IS-013, 2.7) and (Refer to SLCAP 4500 Section 6, OM Part A, 10.1.3)
- (d) The method of determining Aerodrome Operating Minima (Ref IS-013, 2.8) and to (SLCAP 4500 Section 6, OM Part A 10.1.6)
- (e) Additional requirements for single pilot operations under the Instrument Flight Rules (IFR) at night (IS-013, 9.1 & 9.2) and (Refer to SLCAP 4500 Section 6, OM Part A 10.24



- (f) Flight Time, Flight Duty Periods And Rest Periods (Refer IS-054) and (SLCAP 4500 Section 6, OM Part A, Chapter 8)
- (g) Specific Extended Range Operations (IS-013, 7); (Refer to SLCAP 4500 Section 6, OM Part A, 10.5)
- (h) Additional requirements for operations of single engine turbine-powered aeroplanes at night and/or in Instrument Meteorological Conditions (IMC) (IS-014, 4.  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.26)
- (i) Aircraft-Specific Minimum Equipment List (MEL) (IS-015, 1.3);  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.17 / Part B Chapter 9, 9.1)
- (j) Performance-Based Navigation operations (IS-24)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.3.2 (c) )
- (k) MNPS operations (IS-024)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.3.2 (d) )
- (l) RVSM operations (IS-16, 2.6)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.3.2 (e) )
- (m) Procedures for Electronic Navigation Data Management (IS-16, 5)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.3.2 (f) )
- (n) Aircraft-Specific Maintenance Program (IS-17, 3)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.13, Note)
- (o) Approved Maintenance Organization (IS-17)
- (p) Maintenance Quality Assurance Methodology (IS-17, 7.4)
- (q) Flight Crew Training Programs (IS-18, 3)  
(Refer to SLCAP 4500 Section 9, OM Part D, Chapter 1)
- (r) Training in The Transport Of Dangerous Goods (IS-009, 10)  
(Refer to SLCAP 4500 Section 9, OM Part D, Chapter 5)
- (s) Aerodrome Additional Safety Margin (IS-18, 4.3.3)  
(Refer to SLCAP 4500 Section 6, OM Part A, 6.3 (c) )
- (t) Pilot-in-command area, route and aerodrome qualifications (IS-18, 4.3)  
(Refer to SLCAP 4500 Section 6, OM Part A, 6.3 (A) )
- (u) Use of Flight Simulation Training Devices (IS-18, 3.2, 4.4)  
(Refer to SLCAP 4500 Section 6, OM Part A, Chapter 6.4 (a) note 1, OM Part D Chapter 1, 1.3)



(v) Method of Control And Supervision Of Flight Operations (IS-13, 2.1.3 & IS-19, 1)  
(Refer to SLCAP 4500 Section 6, OM Part A, Chapter 6, 6.8 (a), 2, OM Part A Chapter 3)

(w) Mandatory Maintenance Tasks And Intervals (IS-20, 3.2)

(x) Cabin crew member training programs.(IS 21, 9)  
(Refer to SLCAP 4500 Section 9, OM Part D, Chapter 2)

#### 4.6 PROVISIONS THAT REQUIRE A TECHNICAL EVALUATION

4.6.1. Inspectors from Civil Aviation Authority, Sri Lanka shall conduct a Technical Evaluation of following provisions. After the Technical Evaluation the following provisions may be accepted or approval may be granted.

(a) Details of the Aircraft-Specific Checklists (IS-11 & IS-15, 1.4)  
(Refer to SLCAP 4500, Section 6, OM Part A, 10.3.10 (b), 10.3.11 & Section 7, OM Part B, 3.1)

(b) Details of the Aircraft-Specific Systems (IS-11 & IS-15, 1.4)  
(Refer to SLCAP 4500 Section 7, OM Part B 3.1)

(c) Mandatory Material For The Operations Manual (IS-13, 2.3.2)  
(Refer to SLCAP 4500 Section 6, OM Part A, 1.2 Note 1, and compliance checklist Appendix 3)

(d) Engine Trend Monitoring Systems (IS-14, 4.2)

(e) Equipment For Aeroplanes Operated By A Single Pilot Under The Instrument Flight Rules Or At Night (IS-15, 22 & IS-13, 9)  
(Refer to SLCAP 4500, Section 06, OM Part A, 10.24)

(f) Requirements For Approval To Operate In RVSM Airspace (IS-16, 2.7)  
(Refer to SLCAP 4500 Section 6, OM Part A 10.3.2 (e) )

(g) Monitoring Of Height-Keeping Performance Of Aeroplanes Approved To Operate In RVSM Airspace (IS-16, 2.8 & Appendix 1)  
(Refer to SLCAP 4500, Section 06, OM Part A 10.3.2 (e) )

(h) Procedures for Distribution And Insertion Of Electronic Navigation Data In Aircraft (IS-16, 5)  
(Refer to SLCAP 4500 Section 6, OM Part A 10.3.2 (f) )

(i) Operator's Aircraft-Specific Maintenance Responsibilities (Refer to IS 017, 1)

(j) Method Of Maintenance And Release (IS-17, 8)  
(Refer to SLCAP 4500, Section 6, Part A 10.1.15)

(k) Maintenance Control Manual (IS-17, 2)  
(Refer to SLCAP 4500, Section 6, Part A 10.1.12)



- (l) Mandatory Material For The Maintenance Control Manual (IS-17, 2 & IS-20, 2)  
(Refer to SLCAP 4500, Section 6, Part A 10.1.12 (a) )
- (m) Reporting Of Maintenance Experience Information (IS-17,5)  
(Refer to SLCAP 4500, Appendix 1, 2.8 (c) )
- (n) Implementing Necessary Maintenance Corrective Actions (IS-17, 5) (ICAO Annex 6, STD 8.5.2)  
(Refer to SLCAP 4500, Appendix 1, 2.3 (a) )
- (o) Modification And Repair Requirements (IS-17, 6)  
(Refer to SLCAP 4500, Section 6, Part A 10.1.14 (b) )
- (p) Minimum Competence Level Of Maintenance Personnel (IS-17, 7.6.3 & IS-66)
- (q) Requirement For Flight Navigator (IS-18, 1.4)  
(Refer to SLCAP 4500 Section 6, OM Part A 5.1 (d) )
- (r) Training Facilities (IS18- 3.1 (a) )  
(Refer to SLCAP 4500 Section 9, OM Part D Chapter 1- 1.2 (a), 1.6, 2.6, 3.6, 4.5, 5.1, 5.2)
- (s) Qualifications Of Instructors (IS-90)  
(Refer to SLCAP 4500 Section 9, OM Part D, Chapter 1- 1.10, 2.7, 3.7)
- (t) Need For Recurrent Training (IS 18 – 3.1)  
(Refer to SLCAP 4500 Section 9, OM Part D, 1.4)
- (u) Use Of Correspondence Courses And Written Examinations (IS18- 3.1 & Note 4 & Note 5) (Refer to SLCAP 4500 Section 9, OM Part D, Chapter1, 1.4)
- (v) Use Of Flight Simulation Training Devices (IS 18- 4.1, 4.2.1)  
(Refer to SLCAP 4500, Section 6, OM Part A, Chapter 6.4 & Section 9, OM Part D, Chapter1, 1.5)
- (w) Flight Crew Qualification Records (IS 18 – 4.3.4)  
(Refer to SLCAP 4500 Section 6, OM Part A, 6.10 (a) )
- (x) Designated Representative Of The State Of The Operator (IS 18 – 4.4.1)  
(Refer to SLCAP 4205 - Designated Check Pilot Manual)
- (y) Pilot Experience, Recency And Training Requirements For Single Pilot Operations Under The Instrument Flight Rules (IFR) Or At Night (IS 18 – 4.5)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.24 (C) )
- (z) Flight Manual Changes (IS 20 – 1)  
(Refer to SLCAP 4500 Section 6, OM Part A 10.1.24 (B) )



(aa) Minimum Number Of Cabin Crew Assigned To A Specific Aircraft (IS21 – 4)  
(Refer to SLCAP 4500 Section 6, OM Part A, 5.1.1 (e) )

(bb) Altimetry System Performance Requirements For Operations In RVSM Airspace (IS 16- Appendix 1)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.3.4 )

#### 4.6.2. Single-engine operations

(i) Turbine engine reliability for approved operations by single-engine turbine-powered aeroplanes at night and/or in instrument meteorological conditions (IMC)  
(Refer to IS 14- 4, SLCAP 4500, Section 6, OM Part A Chapter 10.26)

(ii) Systems And Equipment  
(Refer to IS 014, 6.2 Note 2.  
(Refer to SLCAP 4500, Section 6, OM Part A Chapter 10.26.1 Note 2)

(iii) Minimum Equipment List  
(Refer IS 14, Appendix 1,3 & IS 15, 1.3) and (Refer to SLCAP 4215 MMEL/MEL Procedures Manual)  
(Refer to SLCAP 4500 Section 7, O13M Part B, Chapter 9, Section 6, OM Part A, Chapter 10.1.17)

(iv) Flight Manual Information  
(Refer to IS 14, Appendix 2, 4)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.26.1 (g) )

(v) Event Reporting  
(Refer to IS 14, Appendix 2, 5)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.26.1 (h) )

(vi) Operator Planning  
(Refer to IS 14, Appendix 2, 6)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.26.1 (b) (i) )

(vii) Flight Crew Experience, Training And Checking  
(Refer to IS 14, Appendix 2, 7)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.26.1 (c), (d), (e) )

(viii) Route Limitations Over Water.  
(Refer to IS 14, Appendix 2, 8)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.26.1 (b) (iii) )

(ix) Operator Certification Or Validation.  
(Refer to IS 14, Appendix 2, 9)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.26 note 2)

#### 4.7 OTHER APPROVAL OR ACCEPTANCE CONSIDERATIONS

*Note (extract from ICAO Annex 6, Attachment C, Paragraph 5)*

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*Some States provide for approval or acceptance of certain critical documents, records or procedures specified in Annex 6, Part I, although the relevant Annex 6 Standards do not require approval or acceptance by the State of the Operator.*

4.7.1. Inspectors from Civil Aviation Authority, Sri Lanka shall conduct a technical evaluation of following provisions. After the technical evaluation the following provisions may be accepted or approval may be granted.

- (a) Safety Program  
(Refer IS 13- 1.4 Note)  
(Refer to SLCAP 4500 Section 6, OM Part A, 3.3 & SLCAP 2600)
- (b) Flight Data Analysis Program  
(Refer IS 12, 3.3)  
(Refer to SLCAP 4500 Section 6, OM Part A, 3.3 (d) )
- (c) Method For Obtaining Aeronautical Data (Refer IS 13- 1)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.2 (a), (b), (c) )
- (d) Adequacy Of The Fuel And Oil Records (Refer IS13 – 2.10)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.6 (c)
- (e) Adequacy Of Flight Time, Flight Duty And Rest Period Records  
(Refer IS 13– 10.8 & IS 54 -6.11)  
(Refer to SLCAP 4500 Section 6, OM Part A, Chapter 8.3)
- (f) Adequacy Of The Aircraft Maintenance Log Book (IS 13-3, 17-4 & IS 20, 2 (d) )  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.15)
- (g) Adequacy Of The Load Manifest (Refer IS 13, 3.1 (d), (e ), (f) )  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.7)
- (h) Adequacy Of The Operational Plan (Refer IS 13, 3.1 (g) & 3.3)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.9 & 10.1.10)
- (i) Method For Obtaining Weather Data (Refer IS 13, 3.5)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.19 (VI) )
- (j) Method Of Compliance With Carry-On Baggage Stowage (Refer IS 13 8) ,  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.16.1 (d) )
- (k) Aeroplane Performance Operating Limitations (Refer IS 14, 2.4) )  
(Refer to SLCAP 4500 Section 6, OM Part A, Chapter 9)
- (l) Method Of Obtaining And Applying Aerodrome Obstacle Data ( Refer IS 14, 3)  
(Refer to SLCAP 4500 Section 6, OM Part A, 9.6 (h) )
- (m) Adequacy Of Passenger Information Cards (Refer IS 15, 2.2 (d))  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.17 (e) )
- (n) Procedures For Long-Range Navigation (Refer IS 16, 2.2 (b) )  
(Refer to SLCAP 4500 OM Part A, 10.3.2)

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- (o) Contents Of The Journey Log Book (Refer IS 20, 4.1)  
(Refer to SLCAP 4500 Section 6, OM Part A, 10.1.18)
- (p) Content Of The Security Training Program (Refer IS 22, 4.1)  
(Refer to SLCAP 4500 Section 9, OM Part D, Chapter 6 )

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## SECTION 5 STRUCTURE OF THE OPERATIONS MANUAL

### 5.1 STRUCTURE OF THE OPERATIONS MANUAL

5.1.1. The Operations manual shall be organized with the following structure.

5.1.2. The Operations Manual may be issued in separate parts corresponding to specific aspects of the operation.

### 5.2 PART A: GENERAL

This part shall comprise all type-related operational policies, instructions and procedures needed for a safe operation.

### 5.3 PART B: AIRCRAFT OPERATING INFORMATION

This part shall comprise all type-related instructions and procedures needed for a safe operation. It shall take account of any differences between types, variants or individual aeroplanes used by the operator.

### 5.4 PART C: AREAS, ROUTES AND AERODROMES

This part shall comprise all instructions and information needed for the area of operation.

### 5.5 PART D: TRAINING

This part shall comprise all training instructions for personnel required for a safe operation.



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## SECTION 6 OPERATIONS MANUAL - PART A

### 6.1 INSTRUCTIONS FOR COMPILING OPERATIONS MANUAL – PART A

- 6.1.1. The Operations manual (PART A) referred to in Section 5 shall contain at least the following and comply with the format given below.
- 6.1.2. Operations Manual (Part A) may be compiled in many volumes by the Operator. However all applicable requirements as given in this manual (SLCAP 4500, Section 6, 6.2) for the Operator's operation must be covered.
- 6.1.3. The Operator shall ensure that Operations Manual (Part A) conform to the format below and is relevant to the area of operation.
- 6.1.4. For standardization the following numbering system must be retained in the manual and "Not applicable" should be annotated against a paragraph if it is not applicable for the proposed operation.
- 6.1.5. If a separate manual is made in respect of any subject paragraph state so instead of "not applicable".

### 6.2 CONTENTS OF THE OPERATIONS MANUAL -PART A

REFER TO NEXT PAGE



## OPERATIONS MANUAL - Part A

### GENERAL

- **Record of Revisions**  
Use format of Record of Revision page from this manual (SLCAP 4500).
- **List of effective pages**  
Use format of List of effective page from this manual (SLCAP 4500).
- **History of Revisions**  
Use format of History of revisions page from this manual (SLCAP 4500).
- **Table of contents**  
Use format of table of contents page from this manual (SLCAP 4500).
- **Foreword**  
Use format of Foreword page from this manual (SLCAP 4500).The foreword shall be signed by the Accountable manager.
- **Acronyms / Abbreviations**  
Use Acronyms / Abbreviations given in this manual (SLCAP 4500).
- **Definitions**  
Use Definitions given in this manual (SLCAP 4500).

Note: Refer to SLCAP 4500, Section 2 paragraph 2.2 for manual standards for the preparation of the Operations Manual



## Chapter - 1 ADMINISTRATION AND CONTROL OF OPERATIONS MANUAL

### 1.1 Introduction

- (a) A statement that the manual complies with all applicable laws, regulations and any other requirements published by the DGCA, with the terms and conditions of the applicable Air Operator Certificate / Operations Specifications.
- (b) A statement that the manual contains operational instructions that are to be complied with by all personnel (Refer IS 013, General (iii) & subparagraph 2.4.1.)
- (c) Operator's instructions to ensure that;
  - (i) All employees when abroad know that they must comply with the laws, regulations and procedures of those States in which operations are conducted (Refer IS 012, 1.1).
  - (ii) All pilots are familiar with the laws, regulations and procedures, pertinent to the performance of their duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto (Refer IS 012, 1.2).
  - (iii) An operator or a designated representative shall have responsibility for operational control.

**Note** — *the rights and obligations of a State in respect to the operation of aeroplanes registered in that State are not affected by this provision.*

- (iv) Responsibility for operational control shall be delegated only to the pilot-in-command and to a flight operations officer/flight dispatcher if an operator's approved method of control and supervision of flight operations requires the use of flight operations officer/flight dispatcher personnel.

**Note**— *Guidance on the operational control organization and the role of the flight operations Officer/flight dispatcher is contained in the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335). Detailed guidance on the authorization, duties and responsibilities of the flight operations officer/flight dispatcher is contained in the Preparation of an Operations Manual (Doc 9376). The requirements for age, skill, knowledge and experience for licensed flight operations officers/flight dispatchers are contained in ICAO Annex 1.*

- (v) *If an emergency situation which endangers the safety of the aeroplane or persons becomes known first to the flight operations officer/flight dispatcher, action by that person in accordance with Implementing Standard 013, 6.2 shall include, where necessary, notification to the appropriate authorities of the nature of the situation without delay, and requests for assistance if required.*
- (vi) If an emergency situation which endangers the safety of the aeroplane or persons necessitates the taking of action which involves a violation of local regulations or procedures, the pilot-in-command shall notify the local authority without delay. If required by the State in which the incident occurs, the pilot-in-command shall



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submit a report on any such violation to the appropriate authority of such State; in that event, the pilot-in-command shall also submit a copy of it to the DGCA. Such reports shall be submitted as soon as possible and normally within ten days.

(vii) *Operators shall ensure that pilots-in-command have available on board the aeroplane all the essential information concerning the search and rescue services in the area over which the aeroplane will be flown.*

*Note— this information may be made available to the pilot by means of the operations manual or such other means as is considered appropriate.*

(viii) *Operators shall ensure that flight crews demonstrate the ability to speak and understand the language used for radiotelephony communications as specified in Annex 1.*

#### (d) Various parts of the Operations Manual

- (i) A brief description of the following parts of the Operations manual, their applicability and use.
  - a. Operations manual Part A
  - b. Operations manual Part B
  - c. Operations manual Part C
  - d. Operations manual Part D
- (ii) In addition list all separate manuals complementing above Parts of the Operations manual and include their applicability and use.

### 1.2 System of amendment , revision and distribution

- (a) A statement as to which person of the Operator is responsible for the contents of the Operations Manual (Part A, B, C, D) is kept current at all times and for liaising with Civil Aviation Authority, Sri Lanka in respect of amendments and revisions to the manual and subsequent publication of Refer IS 013, 2.3).same.
- (b) Operator's procedure to ensure the validity of its manuals at all times.

The procedure shall include the Operations Manual (Part A, B, C and D) and all other manuals required by the Operator's personnel to discharge their duties and responsibilities.
- (c) A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.
- (d) A description of the system for the annotation of pages and their effective dates.
- (e) Annotation of changes (on text, graphics and diagrams)

Operator's procedure to ensure that changes to the manual are marked by a vertical line on the right hand side of the page indicating the changed material.

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This procedure shall be applicable to the Operations Manual (Part A, B, C and D) and all other manuals required by the Operator's personnel to discharge their duties and responsibilities.

(f) Temporary revisions.

This procedure shall be applicable to the Operations Manual (Part A, B, C and D) and all other manuals required by the Operator's personnel to discharge their duties and responsibilities.

(g) A description of the distribution system for the manuals, amendments and revisions.

This procedure shall be applicable to the Operations Manual (Part A, B, C and D) and all other manuals required by the Operator's personnel to discharge their duties and responsibilities (Refer IS 013, 2.3).

- (i) A description of the system for the distribution of the manuals, amendments and revisions to all required personnel of the Operator and to maintain a current record of the distribution list. This shall include the required personnel of Civil Aviation Authority, Sri Lanka.
- (ii) A statement to ensure that all operators' personnel (who are holders of the Operations manual) made responsible for the prompt revision of the Operations manual.
- (iii) Nomination of a person to be responsible for the revision of the Operations manuals carried on board the aircraft



## Chapter - 2 ORGANISATION AND RESPONSIBILITIES

### 2.1 Organizational structure

#### (a) Company organogram

A description of the organizational structure, including the general company organogram.

The organogram must depict the relationship between the Operations Department and other Departments of the company. In particular, the subordination and reporting lines of all Divisions, Departments, etc., which pertains to the safety of flight operations, must be shown.

#### (b) Flight Operations department organogram

The organogram must depict the relationship between all Operations Department personnel. In particular, the subordination and reporting lines of all personnel shall be shown.

### 2.2 Nominated post holders.

#### (i) The name of each nominated post holder

(Refer to Appendix 1 of this manual “Qualifications and Level of Experience Nominated Post Holders” for the list of required post holders).

#### (ii) The contact details of each nominated post holder

#### (iii) A description of the functions, duties, responsibilities and the authority of each nominated post holder.

Responsibility must be allocated pertaining to safety of flight operations, and for the compliance with the applicable regulations.

### 2.3 Authority, duties and responsibilities of the Pilot in Command.

Authority, duties and responsibilities of the Pilot in Command as delegated by the Operator and to include following; (IS-013, 5)

#### (a) Authority of Pilot in Command of an aircraft

The Pilot in Command of an aircraft shall have final authority as to the disposition of the aircraft while in command.

#### (b) Responsibility of Pilot-in-Command for compliance with the rules of the air

The Pilot-in-Command of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with the rules of the air, except that the pilot-in-command may depart from these rules in circumstances that render such departure absolutely necessary in the interests of safety.

#### (c) The pilot-in-command shall be responsible for the safety of all crew members, passengers and cargo on board when the doors are closed. The pilot-in-command

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shall also be responsible for the operation and safety of the aeroplane from the moment the aeroplane is ready to move for the purpose of taking off until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion units are shut down. (IS 013, 5.1)

- (d) The pilot-in-command shall ensure that the checklists specified in 2.6 of IS-013 are complied with in detail (IS 013, 5.2).
- (e) The pilot-in-command of an aircraft shall ensure that a suspected communicable disease is reported promptly to air traffic control (ATC), with transmission of the following information in order to facilitate provision for the presence of any special medical personnel and equipment necessary for the management of public health risks on arrival.
- I. Aircraft identification;
  - II. Departure aerodrome;
  - III. Destination aerodrome;
  - IV. Estimated time of arrival;
  - V. Number of persons on board;
  - VI. Number of suspected case(s) on board; and
  - VII. Nature of the public health risk, if known?

In the event of a case of suspected communicable disease on board an aircraft, the pilot-in-command may need to follow his operator's protocols and procedures, in addition to health-related legal requirements of the countries of departure and/or destination. The latter would normally be found in the Aeronautical Information Publications (AIPs) of the States concerned.

When a public health threat has been identified, and when the public health authorities of a Contracting State require information concerning passengers' and/or crews' travel itineraries or contact information for the purposes of tracing persons who may have been exposed to a communicable disease, that Contracting State should accept the "Public Health Passenger Locator Card" reproduced in Appendix 1 of IS 045, as the sole document for this purpose.

**Note:** For more guidance refer Implementing Standards 045

- (f) The pilot-in-command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aeroplane, resulting in serious injury (refer to definitions in this manual) or death of any person or substantial damage to the aeroplane or property. (IS-013, 5.3).

*Note: Definition of the term "serious injury" is contained in Annex 13.*

- (g) The pilot-in-command shall be responsible for reporting (in writing) all known or suspected defects in the aeroplane, to the operator, at the termination of the flight. (IS-013, 5.4)
- (h) The pilot-in-command shall be responsible for the journey log book or the general declaration containing the information listed in 4.1 of Implementing Standards 020, Operations Manual Part A, and (IS 013, 5.5)



**Note.** — By virtue of Resolution A10-36 of the Tenth Session of the Assembly (Caracas, June–July 1956) “the General Declaration, [described in ICAO Annex 9] when prepared so as to contain all the information required by Article 34 [of the Convention on International Civil Aviation] with respect to the journey log book, may be considered by DGCA to be an acceptable form of journey log book”.

- (i) The Pilot in Command shall ensure that Hazardous flight conditions such as volcanic ash encountered during flight, other than those associated with meteorological conditions, shall be reported to the appropriate aeronautical station as soon as possible. The reports so rendered shall give such details as may be pertinent to the safety of other aircrafts (IS 013, 4.3 B (7), (8), Note, 4.4).
- (j) If an emergency situation which endangers the safety of the aeroplane or persons necessitates the taking of action which involves a violation of local regulations or procedures, the pilot-in-command shall notify the appropriate local authority without delay. If required by the State in which the incident occurs, the pilot-in-command shall submit a report on any such violation to the appropriate authority of such State; in that event, the pilot-in-command shall also submit a copy of it to the DGCA. Such reports shall be submitted as soon as possible and normally within ten days.
- (k) Prior to each flight, Pilots-in-command shall ensure that on board the aeroplane there are all the essential information concerning the search and rescue services in the area over which the aeroplane will be flown.
- (l) The Pilot in Command shall ensure that any inadequacy of facilities observed in the course of operations is reported to the authority responsible for them, without undue delay.

Such reports shall also be copied to the Accountable Manager.

- (m) The Pilot in Command shall ensure that when passengers or cargo are being carried, no emergency or abnormal situations are simulated. (IS-013)
- (n) The Pilot in Command shall ensure that checklists provided in accordance with Operations Manual Part B, Chapter 3.1 shall be used by flight crews prior to, during and after all phases of operations, and in emergency, to ensure compliance with the operating procedures contained in the aircraft operating manual and the aeroplane flight manual or other documents associated with the certificate of airworthiness and otherwise in the operations manual, are followed. (IS-013,.2.6)
- (o) Pilot in Command shall ensure that prior to flight, each aeroplane carry a certified true copy of the air operator certificate (including lease aircraft), and a copy of the operations specifications relevant to the aeroplane type, issued in conjunction with the certificate. When the certificate and the associated operations specifications are issued in a language other than English, an English translation shall be included.
- (p) Pilot in Command shall ensure that, the aeroplane carry following manuals/ documents / charts in each flight;



- (i) The Operations Manual (Part A,B,C,D), or those parts of it that pertain to flight operations; (hard copy or in the EFB) (IS 015, 2.3)
- (ii) The Flight Manual for the aeroplane, or other documents containing performance data required for the application of requirements in Operations Manual Part A Chapter 9 and any other information necessary for the operation of the aeroplane within the terms of its certificate of airworthiness, unless these data are available in the Operations Manual Part B; (IS 015, 2.3)
- (iii) Current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted; (IS 015, 2.3)
- (iv) A document attesting noise certification;

When the document, or a suitable statement attesting noise certification as contained in another document approved by the State of Registry, is issued in a language other than English, it shall include an English translation (IS 20, Appendix 1).

- (q) In respect of Flight Recorders the Pilot in Command shall ensure that (IS 015, 3.4);

- (i) Flight recorders are not switched off during flight time.
- (ii) To preserve flight recorder records, flight recorders shall be deactivated upon completion of flight time following an accident or incident.

The flight recorders shall not be reactivated without prior approval from the DGCA.

- (iii) Flight Recorders — Continued Serviceability

Operational checks and evaluations of recordings from the flight recorder systems shall be conducted to ensure the continued serviceability of the recorders as per the flight crew SOP's.

- (r) Pilot in Command shall ensure that all flight crews required to be on flight deck duty shall communicate through boom or throat microphones below the transition level/altitude.

- (s) Reporting Acts Of Unlawful Interference

Following an act of unlawful interference, the pilot-in command shall submit, without delay, a report of such an act to Civil Aviation Authority, Sri Lanka with a copy to flight operations management (IS 022, 5)

- (t) Flight Preparation

A flight shall not be commenced until flight preparation forms have been completed certifying that the pilot-in command is satisfied that (IS 013, 3):

- (i) The aeroplane is airworthy;
- (ii) The instruments and equipment prescribed in IS 015 for the particular type of operation to be undertaken, are installed and are sufficient for the flight;



- (iii) A maintenance release as prescribed in Operations Manual Part A, 10.1.15 has been issued in respect of the aeroplane;
  - (iv) The mass of the aeroplane and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;
  - (v) Any load carried is properly distributed and safely secured;
  - (vi) A check has been completed indicating that the operating limitations of Operations Manual Part A, Chapter 9 can be complied with for the flight to be undertaken; and
  - (vii) The requirement of Operations Manual Part A, 10.1.9 (b) relating to operational flight planning have been complied with.
- (u) Pilot in Command shall convey (as far as practicable) safety-related information to the flight Operations Officer including information related to any amendments to the flight plan that became necessary in the course of the flight.
- (v) Pilot in Command shall ensure that, prior to flight, each aeroplane shall carry a certified true copy of the transfer agreement of supervisory functions and duties pursuant to Article 83 *bis* of the Chicago Convention if applicable (IS 091).
- (w) In-Flight Fuel Management (IS-013, 3.7)

The operator shall establish policies and procedures, approved by the DGCA to ensure that inflight fuel checks and fuel management are performed.

- (i) The pilot-in-command shall continually ensure that the amount of usable fuel remaining on board is not less than the fuel required to proceed to an aerodrome where a safe landing can be made with the planned final reserve fuel remaining upon landing.

Note. — The protection of final reserve fuel is intended to ensure a safe landing at any aerodrome when unforeseen occurrences may not permit safe completion of an operation as originally planned. Guidance on flight planning, including the circumstances that may require re-analysis, adjustment and/or re-planning of the planned operation before take-off or en-route, is contained in the Flight Planning and Fuel Management (FPFM) Manual (Doc 9976).

- (ii) The pilot-in-command shall request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome with less than the final reserve fuel plus any fuel required to proceed to an alternate aerodrome or the fuel required to operate to an isolated aerodrome.
- (iii) The pilot-in-command shall advise ATC of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome may result in landing with less than the planned final reserve fuel.

Note 1. — The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing and any change to the existing clearance may result in landing with less



than the planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

Note 2. — Guidance on declaring minimum fuel is contained in the Flight Planning and Fuel Management (FPFM) Manual (Doc 9976).

- (iv) The pilot-in-command shall declare a situation of fuel emergency by broadcasting MAYDAY MAYDAY MAYDAY FUEL, when the calculated usable fuel predicted to be available upon landing at the nearest aerodrome where a safe landing can be made is less than the planned final reserve fuel.

Note 1. —The planned final reserve fuel refers to the value calculated in 4.3.6.3 e) 1) or 2) and is the minimum amount of fuel required upon landing at any aerodrome.

Note 2. —The words “MAYDAY FUEL” describe the nature of the distress conditions as required in Annex 10, Volume II, 5.3.2.1.1 b) 3.

Note 3. — Guidance on procedures for in-flight fuel management is contained in the Flight Planning and Fuel Management (FPFM) Manual (Doc 9976).

## **2.4 Authority, Duties And Responsibilities Of All Flight crews Other Than The Commander**

As delegated by the Operator (Refer IS 018).

## **2.5 Authority, Duties And Responsibilities Of Cabin Crew Members**

As delegated by the Operator (Refer IS 021).

## **2.6 Authority, Duties And Responsibilities Of Flight Operations Officers / Flight Dispatcher**

Authority, duties and responsibilities of the Flight operations officer as delegated by the Operator and to include following;

- (a) A flight operations officer (if required in conjunction with the approved method of control and supervision of flight operations in accordance with 6 of IS 013 & IS 19), shall:
- (i) Assist the Pilot-in-Command in flight preparation and provide the relevant information;
  - (ii) Assist the Pilot-in-Command in preparing the operational and ATS flight plans, sign when applicable and file the ATS flight plan with the appropriate ATS unit; and
  - (iii) Furnish the Pilot-in-Command while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight.
  - (iv) Notify the appropriate ATS unit when the position of the aeroplane cannot be determined by an aircraft tracking capability and attempts to establish communication are unsuccessful.



(b) In the event of an emergency, a flight operations officer shall:

- (i) Initiate such procedures as outlined in the Operations Manual while avoiding taking any action that would conflict with ATC procedures;
- (ii) Convey safety-related information to the Pilot-in-Command that may be necessary for the safe conduct of the flight, including information related to any amendments to the flight plan that become necessary in the course of the flight.
- (iii) If an emergency situation which endangers the safety of the aeroplane or persons becomes known first to the flight operations officer, he shall, where necessary, notify the appropriate authorities of the nature of the situation without delay, and requests for assistance if required.

(c) In-flight operational instructions

Flight Operations Officer shall ensure that;

Operational instructions involving a change in the ATS flight plan shall, when practicable, be coordinated with the appropriate ATS unit before transmission to the aeroplane.



## Chapter - 3 OPERATIONAL CONTROL AND SUPERVISION

### 3.1 Supervision Of The Operation By The Operator

A description of the system for supervision of the operation by the operator (IS 013, 2).

This must show how the safety of flight operations and the qualifications of personnel involved in such operations are supervised and monitored.

In particular, the procedures related to the following items must be described:

- (a) Monitoring of validity of Licenses
- (b) Monitoring of validity of all other qualifications / requirements as per the Operations Manual
- (c) Competence of operations personnel
- (d) Control, analysis and storage of records, flight documents and safety related data.

*Note: Refer to Appendix 2 of this manual for the required document storage periods.*

### 3.2 System Of Promulgation Of Additional Operational Instructions And Information

A description of a system for promulgating information which may be of an operational nature but is supplementary to that in the Operations Manual.

The applicability of this information and the responsibilities for its promulgation must be included.

### 3.3 Safety Management System

- (a) Operator's Safety Management System which;
  - (i) Identifies safety hazards
  - (ii) Ensures that remedial action necessary to maintain an acceptable level of safety established by the DGCA is implemented.
  - (iii) Provides for continuous monitoring and regular assessment of the safety level achieved.
  - (iv) Aims to make continuous improvement to the overall level of safety.
  - (v) Include a Statement of Safety policy

Note. — Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859) gazette notification number 1882/49 dated 03<sup>rd</sup> October 2014.

- (b) The Safety Management System shall clearly define lines of safety accountability / responsibility throughout the Operator's organization, including a direct accountability / responsibility for safety on the part of senior management.



(c) The Operator's Safety Management System shall comply with the State Safety Program (SSP), gazette notification 2065/38 dated 05<sup>th</sup> April 2018 (SLCAP 2600).

(d) Description of the Operator's Flight Data Analysis Program (Refer SLCAP 4220).

(i) An operator of an aeroplane of a maximum certificated take-off mass in excess of 27000 kg shall establish and maintain a flight data analysis program as part of its safety management system.

(ii) The flight data analysis program shall be non-punitive and contain adequate safeguards to protect the source(s) of the data.

(iii) Refer to ASN 073

(e) Description of the Operator's flight safety document system

An operator shall establish a flight safety documents system, for the use and guidance of operational personnel, as part of its safety management system.  
(Refer to IS 002).

(f) Rescue & Fire Fighting Service

IS-013, Appendix 1 contains guidance on assessing an acceptable level of RFFS protection. The operator shall, as part of its safety management system, assess the level of rescue and firefighting service (RFFS) protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aeroplane intended to be used.

Note. — Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

(g) Information related to the level of RFFS protection that is deemed acceptable by the operator shall be contained in the operations manual.

Note 1. At aerodromes.

Note 2. — It is not intended that this guidance limit or regulate the operation of an aerodrome. The assessment performed by the operator does not in any way affect the RFFS requirements of Annex 14, Volume I, for aerodromes.

### 3.4 Aircraft Tracking

As per ICAO Annex 06 – 10th edition it will be applicable on and after 8<sup>th</sup> November 2018 (IS 012, 5)

### 3.5 Operational Control

(a) Operator's organization and management system for the operational control of all flights (to be in compliance with operating regulations applicable to aircraft operations published by the DGCA).

(b) Definition of responsibilities necessary to exercise operational control with respect to flight safety and operation of the aircraft in conformity to Air Operator Certificate / Operations Specifications and all applicable regulations.

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(c) Functions and responsibilities of flight crew and flight operations officers for the initiation, continuation, diversion and termination of flights.

(d) Operator's policies, process, standards and procedures in relation to operational control of flight operations.

(e) Following shall be complied with.

(i) Operational control for the entire operation

Operator shall designate a representative who shall have responsibility for operational control for all flight operations.

(ii) Operational control for an individual flight

Operator's procedure to ensure that responsibility for operational control for an individual flight shall be delegated only to the pilot-in-command and to a flight operations officer if the operator's approved method of control and supervision of flight operations requires the use of flight operations officer/flight dispatcher for flight dispatch, and for flight watch or flight tracking of such light.

### 3.6 Powers of the DGCA

A description of the powers of the Authority and guidance to staff on how to facilitate inspections by Authority personnel.



## Chapter - 4 QUALITY SYSTEM

4.1 A description of the quality system adopted by the Operator including at least;

- (a) Quality policy;
- (b) A description of the organization of the quality system;
- (c) Allocation of duties and responsibilities.
- (d) Procedures



## Chapter - 5 AEROPLANE FLIGHT CREW

### 5.1 Composition of Crew

#### (a) Composition Of The Flight Crew

The number and composition of the flight crew shall not be less than that specified in the Operations Manual. The flight crew shall include the flight crews in addition to the minimum numbers specified in the flight manual or other documents associated with the certificate of airworthiness, when necessitated by considerations related to the type of aeroplane used, the type of operation involved, and the duration of flight between points where flight crews are changed (Ref – IS-018, 1.1)

#### (i) Procedure for determining crew composition per each flight , taking account of the following:

- a. Aeroplane certification standard
- b. The type of aeroplane used,
- c. The type of operation involved
- d. The area of the Operation undertaken
- e. The duration of flight between points where flight crews are changed.
- f. Experience (total and on type), recency and qualification of the crew members;
- g. The minimum crew requirement and flight duty period planned;
- h. Requirement of Flight crews who are above the age of 60 years
- i. If necessitated by the duration of the flight, the procedures for the relief of the members of the flight crew ,including the relief of crew members who are above 60 years of age

#### (b) Radio Operator

Operator's procedure to ensure following.

The flight crew to include at least one member, who holds a valid license, issued or rendered valid by Civil Aviation Authority, Sri Lanka authorizing operation of the type of radio transmitting equipment to be used. (IS-018, 1.2)

#### (c) Flight Engineer

Operator's procedure to ensure following.

When a separate flight engineer's station is incorporated in the design of an aeroplane, the flight crew shall include at least one flight engineer especially assigned to that station, unless the duties associated with that station can be satisfactorily performed by another flight crew, holding a flight engineer license, without interference with regular duties,(IS-018,1.3)

#### (d) Flight Navigator

Operator's procedure to ensure following.

The flight crew shall include at least one member who holds a flight navigator license in all operations where, as determined by Civil Aviation Authority, Sri Lanka, navigation necessary for the safe conduct of the flight cannot be adequately accomplished by the pilots from the pilot station. (IS-018, 1.4)

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(e) Composition Of Cabin Crew (Refer IS 021)

- (i) Operator shall establish, the minimum number of cabin crew required for each type of aeroplane, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aeroplane, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation.

The operator shall assign these functions for each type of aeroplane.

- (ii) Rules applicable to the designation of the senior cabin crew member
- (iii) Requirement of minimum cabin crew per type of aeroplane in consideration of the nature / duration of the flight
- (iv) If necessitated by the duration of the flight, the procedures for the relief of the senior cabin crew member and any other member of the cabin crew.

5.1.1. The operator shall, for each type of aeroplane, assign to all flight crews the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation. Annual training in accomplishing these functions shall be contained in the operator's training programme and shall include instruction in the use of all emergency and life-saving equipment required to be carried, and drills in the emergency evacuation of the aeroplane. – (IS 18, 2)

**5.2 Designation of the Pilot in Command**

The Operator's policy applicable to the designation of the Pilot in Command.

The policy must include;

- (a) Procedure to designate one pilot to act as pilot-in-command for each flight.
- (b) If necessitated by the duration of the flight, the procedure for the relief of the Pilot in Command
- (c) The delegation of duties / responsibilities of pilot in command when nominated pilot in command is taking rest due to duration of the flight
- (d) Designation of Pilot in Command when two Captains are rostered to fly together when applicable

**5.3 Flight Crew Incapacitation**

Instructions on the succession of Command in the event of flight crew incapacitation.

**5.4 Operation Of More Than One Type**

Operator's policy, in respect of following crew members operating more than one type of aeroplane.

- (a) Flight crew (IS 18, 4.2)
- (b) Cabin crew (IS 021)



## Chapter - 6 QUALIFICATION REQUIREMENTS

### 6.1 Flight Crew (IS 018, 4)

A description of the required license, rating(s), qualification/competency (e.g. for routes and aerodromes), experience, training, checking and recency for following flight crew to conduct their duties.

Consideration must be given to the aeroplane type, kind of operation, composition of the crew.

- (a) Pilot in Command.
- (b) Pilot relieving the Pilot in Command.
- (c) Co-pilot.
- (d) Pilot under supervision.
- (e) Flight Engineer
- (f) Operation on more than one type or variant.

### 6.2 Recent Experience

Operator's procedures to ensure following requirements. - (IS 018, 4.1)

#### (a) Recent experience — Pilot-in-Command and co-pilot

- (i) An operator shall not assign a pilot-in-command or a co-pilot to operate at the flight controls of a type or variant of a type of aeroplane during take-off and landing unless that pilot has operated the flight controls during at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.
- (ii) Recent experience -- When a pilot-in-command or a co-pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the DGCA shall decide under which conditions the requirements of paragraph 6.2 (a) for each variant or each type of aeroplane can be combined.

#### (b) Recent Experience — Cruise pilot (IS-018, 4.2)

- 1) An operator shall not assign a pilot to act in the capacity of cruise pilot in a type or variant of a type of aeroplane unless, within the preceding 90 days that pilot has either:
  - (i) Operated as a pilot-in-command, co-pilot or cruise pilot on the same type of aeroplane; or
  - (ii) Carried out flying skill refresher training including normal, abnormal and emergency procedures specific to cruise flight on the same type of aeroplane or in a flight simulator approved for the purpose, and has practiced approach and landing procedures, where the approach and landing procedure practice may be performed as the pilot who is not flying the aeroplane.



- 2) Recent experience -- When a cruise pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the DGCA shall decide under which conditions the requirements of paragraph 6.2 (b) for each variant or each type of aeroplane can be combined.

### 6.3 (A) Pilot-In-Command Area, Route And Aerodrome Qualification (Is-018, 4.3)

Operator's procedures to ensure following requirements.

- (a) An operator shall not utilize a pilot as pilot-in command of an aeroplane on a route or route segment for which that pilot is not currently qualified until such pilot has complied with paragraph 6.3 (b) and paragraph 6.3 (c) below.
- (b) Each such pilot shall demonstrate to the operator an adequate knowledge of: The route to be flown and the aerodromes which are to be used.

This shall include knowledge of:

- 1 - The terrain and minimum safe altitudes;
- 2 - The seasonal meteorological conditions;
- 3 - The meteorological, communication and air traffic facilities, services and procedures;
- 4 - The search and rescue procedures; and
- 5 - The navigational facilities and procedures, including any long-range navigation procedures, associated with the route along which the flight is to take place;
- 6 - Procedures applicable to flight paths over heavily populated areas and areas of high air traffic density, obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, and applicable operating minima.

*Note. — That portion of the demonstration relating to arrival, departure, holding and instrument approach procedures may be accomplished in an appropriate approved training device which is adequate for this purpose.*

- (c) A pilot-in-command shall have made an actual approach into each aerodrome of landing on the route, accompanied by a pilot who is qualified for the aerodrome, as a member of the flight crew or as an observer on the flight deck, unless:
- (i) The approach to the aerodrome is not over difficult terrain and the instrument approach procedures and aids available are similar to those with which the pilot is familiar, and a margin to be approved by Civil Aviation Authority, Sri Lanka is added to the normal operating minima, or there is reasonable certainty that approach and landing can be made in visual meteorological conditions; or
  - (ii) The descent from the initial approach altitude can be made by day in visual meteorological conditions; or



- (iii) The operator qualifies the pilot-in-command to land at the aerodrome concerned by means of an adequate pictorial presentation; or
  - (iv) The aerodrome concerned is adjacent to another aerodrome at which the pilot-in-command is currently qualified to land. (IS 18, 4.3.)
- (d) An operator shall not continue to utilize a pilot as a pilot-in-command on a route or within an area specified by the operator and approved by DGCA, Sri Lanka unless, within the preceding 12 months, that pilot has made at least one trip as a pilot member of the flight crew, or as a check pilot, or as an observer in the flight crew compartment: (IS 018, 4.3.5)
- (i) Within that specified area; and
  - (ii) If appropriate, on any route where procedures associated with that route or with any aerodromes intended to be used for take-off or landing require the application of special skills or knowledge.
- (e) In the event that more than 12 months elapse in which a pilot-in-command has not made such a trip on a route in close proximity and over similar terrain, within such a specified area, route or aerodrome, and has not practiced such procedures in a training device which is adequate for this purpose, prior to again serving as a pilot-in-command within that area or on that route, that pilot must re qualify in accordance with Operations Manual Part A paragraph 6.3 (b) and 6.3 (c). (IS-018, 3.3)
- (f) The operator shall maintain a record, sufficient to satisfy the DGCA of the qualifications of the Pilot and of the manner in which such qualification has been achieved. (IS- 018.4.3.4)

#### 6.4 Pilot Proficiency Check (PPC)

- (a) Operator's procedure to ensure following (Ref – IS-018, 4.4).

An operator shall ensure that Piloting technique and the ability to execute emergency procedures is checked in such a way as to demonstrate the pilot's competence on each type or variant of a type of aeroplane. Where the operation may be conducted under instrument flight rules, an operator shall ensure that the pilot's competence to comply with such rules is demonstrated to either a Check Pilot of the operator or to a representative of the DGCA of the operator. Such checks shall be performed twice within any period of one year. Any two such checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement.

*Note 1 Flight simulation training devices validated by the DGCA, may be used for those parts of the checks for which they are specifically approved.*

*Note 2. See the manual of criteria for the qualification of flight simulation devices (Doc 9625).*

*Note 3. Three such checks carried out within thirteen (13) consecutive months will satisfy the above requirement. (IS 18, 4.4.1)*

*Note 4. For guidance on training syllabus refer Section 09, OM Part D, 1.3*

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(b) Operator's procedure to conduct the PPC as required in paragraph 6.4 (a) when;

- (i) The operator schedules flight crew on several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling.

The DGCA shall decide under which conditions the requirements of paragraph 6.4 (a) for each variant or each type of aeroplane can be combined.

## 6.5 Language proficiency

Operator's procedure to ensure following.

Operators shall ensure that flight crews demonstrate the ability to speak and understand the language used for radiotelephony communications as specified IS 050 and ASN 101.

## 6.6 Cabin Crew

A description of the required license, rating(s), qualification, experience, training, checking and recency for following cabin crew to conduct their duties (IS 021).

Consideration must be given to the aeroplane type, kind of operation and composition of the crew

(a) Senior cabin crew member.

(b) Cabin crew member.

(i) Required cabin crew member.

(ii) Additional cabin crew member and cabin crew member during familiarization flights.

(c) Operation on more than one type or variant

## 6.7 Flight / Ground Instructors And Personnel Delegated With Checking Functions

A description of the required license, rating(s), qualification, experience, training, checking and recency for following Flight / ground Instructors conducting required training and personnel delegated with Checking functions to conduct their duties (IS 090).

(a) For flight crew.

(b) For cabin crew.

(c) For Flight Operations Officer / Flight Dispatcher

(d) Other required training

## 6.8 Flight Operations Officer / Flight Dispatcher

A description of the required license, rating(s), qualifications, experience, training, checking and recency for Flight Operations Officers to conduct their duties (IS 013, 6 & IS 019).



Consideration must be given to the aeroplane type, kind of operation.

Operator's requirements shall include the following.

- (a) Flight operations officer, employed in conjunction with an approved method of control and supervision of flight operations, shall be licensed.
- (b) Every flight operations officer shall be a holder of a valid license issued by the DGCA.
- (c) A flight operations officer shall not be assigned to duty unless that person has:
  - (i) Satisfactorily completed an operator-specific training course that addresses all the specific components of its approved method of control and supervision of flight operations specified in Operations Manual Part D, Chapter 3;
  - (ii) Made, within the preceding 12 months, at least a one way qualification flight in the flight crew compartment of an aeroplane over any area for which that individual is authorized to exercise flight supervision. The flight should include landings at as many aerodromes as practicable;

*Note. — For the purpose of the qualification flight, the flight operations officer must be able to monitor the flight crew intercommunication system and radio communications, and be able to observe the actions of the flight crew.*

- (iii) Demonstrated to the operator a knowledge of:
  - a. The contents of the Operator's approved Operations Manual;
  - b. The radio equipment in the aeroplanes used;
  - c. The navigation equipment in the aeroplanes used;
- (iv) Demonstrated to the operator a knowledge of the following details concerning operations for which the officer is responsible and areas in which that individual is authorized to exercise flight supervision:
  - a. The seasonal meteorological conditions and the sources of meteorological information;
  - b. The effects of meteorological conditions on radio reception in the aeroplanes used;
  - c. The peculiarities and limitations of each navigation system which is used by the operation; and
  - d. The aeroplane loading instructions;
- (v) Demonstrated to the operator knowledge and skills related to human performance relevant to dispatch duties; and
- (vi) Demonstrated to the operator the ability to perform the duties specified in Operations Manual Part A, paragraph 2.6 & IS 013, 6.
- (vii) Demonstrated to the operator that the flight operations officer assigned to duty maintain complete familiarization with all features of the operation which are



pertinent to such duties, including knowledge and skills related to human performance. In order to achieve that, flight operations officers or flight dispatcher shall undergo a recurrent training once every three years and the recurrent training programme shall be prepared and approved in accordance with Perpetual License Assessment Procedure Manual (SLCAP 3100). Guidance to design training programmes to develop knowledge and skills in human performance can be found in the ICAO Human Factors Training Manual (ICAO Doc 9683).

- (d) A flight operations officer should not be assigned to duty after 12 consecutive months of absence from such duty, unless the provisions of Operations Manual Part D, Chapter 3 are met.

#### **6.9 Other Operations Personnel**

A description of the required license, rating(s), qualifications, experience, training, checking and recency for other operations personnel employed by the Operator as applicable.

#### **6.10 Personal Records**

- (a) The operator shall maintain a record, sufficient to satisfy the DGCA of the qualification of the pilot and of the manner in which such qualification has been achieved.
- (b) The operator shall maintain a record, sufficient to satisfy the DGCA of the qualification of the cabin crew member and of the manner in which such qualification has been achieved.
- (c) The operator shall maintain a record, sufficient to satisfy the DGCA of the qualification of Flight Operations Officer and of the manner in which such qualification has been achieved.
- (d) The operator shall maintain a record, sufficient to satisfy the DGCA of the qualification of other operations personnel and of the manner in which such qualification has been achieved.
- (e) All records listed above shall be stored in a secure place and be available for inspection by the DGCA.



## Chapter - 7 CREW HEALTH PRECAUTIONS

### 7.1 Crew Health Precautions.

The relevant regulations and guidance to crew members concerning health including:

- (a) International regulation in respect of cases of illness on board aircraft
- (b) Quarantine regulations
- (c) Illness or incapacitation while on duty
- (d) Alcohol and other intoxicating liquor
- (e) Narcotics
- (f) Drugs
- (g) Sleeping tablets
- (h) Pharmaceutical preparations
- (i) Immunization
- (j) Deep diving
- (k) Blood donation
- (l) Meal precautions prior to and during flight, symptoms and treatment of poisoning
- (m) Sleep and rest
- (n) Surgical operations
- (o) Vision correction
- (p) Humidity
- (q) Diurnal rhythm
- (r) Fatigue
- (s) Pregnancy
- (t) Tropical medicine

### 7.2 Use of psychoactive substance

Procedures and instructions to ensure that (IS 035, IS 012, 4);

- (a) No person whose function is critical to the safety of aviation (safety sensitive people) undertakes that function while under the influence of any psychoactive substance, by reason of which human performance is impaired. No such person shall engage in any kind of problematic use of substances.



- (b) Holders of licenses of the Operator does not exercise the privileges of their licenses and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.
- (c) Holders of licenses of the Operator do not engage in any problematic use of substances.

### **7.3 Flight Crew Equipment**

Instructions to ensure that (IS 018, 5)

- (a) A flight crew assessed as fit to exercise the privileges of a license, subject to the use of suitable correcting lenses, shall have a spare set of the correcting lenses readily available when exercising those privileges.



## Chapter - 8 FLIGHT TIME, FLIGHT DUTY PERIODS, DUTY PERIODS AND REST PERIODS FOR FATIGUE MANAGEMENT

8.1 For the purpose of managing fatigue, Operator's scheme specifying the limitations applicable to flight time, flight duty periods, duty periods and rest periods for following crew members.

(a) Flight crews

(b) Cabin crew members

The scheme developed by the operator shall be in accordance with IS 054 issued by the DGCA.

8.2 Should variations from the fatigue regulations established as per paragraph 8.1 become necessary, the operator shall establish a means, acceptable to the DGCA, to permit such variations. Any variations shall provide an equivalent level of safety.

*Note. — It is acknowledged that regulations may not cover every eventuality encountered in a dynamic operational environment. This provision is intended to permit the operator a degree of flexibility, in a means acceptable to the DGCA, in making adjustments in its fatigue management scheme to account for changing circumstances.*

8.3 Operator's scheme to maintain records for all its flight and cabin crew members of flight time, flight duty periods, duty periods and rest periods.

The records shall be preserved in a secure location for 15 calendar months by the operator and available for inspection by Civil Aviation Authority, Sri Lanka.

*Note: for more guidance refer SLCAP 4210*



## Chapter - 9 AEROPLANE PERFORMANCE OPERATING LIMITATIONS

Note:

### (a) Large Aeroplanes

Aeroplane performance operating limitations contained in paragraphs 9.2 to 9.10 below are applicable to large aeroplanes to which Parts IIIA and IIIB of ICAO Annex 8 are applicable.

In addition to paragraph 9.2 to 9.10, National requirements contained in National code of performance shall also be complied with.

For aeroplanes for which Parts IIIA and IIIB of ICAO Annex 8 are not applicable because of the exemption provided for in Article 41 of the Convention (refer paragraph (c) below), the level of performance specified in paragraph 9.2 to 9.10 shall be met as far as practicable.

Part IIIA - Aeroplanes over 5700 kg for which application for certification was submitted on or after 13 June 1960 but before 2 March 2004.

Part IIIB - Aeroplanes over 5700 kg for which application for certification was submitted after 2 March 2004.

The provisions of Chapter 9 are applicable to turbine-powered subsonic transport type aeroplanes over 5700 kg maximum certificated take-off mass having two or more engines. However, where relevant, it shall be applied to all subsonic turbine-powered or piston-engine aeroplanes having two, three or four engines.

Piston-engine aeroplanes having two, three or four engines which cannot comply with Chapter 9 of this manual shall continue to be operated in accordance with examples 1 or 2 of Attachment B to ICAO Annex 6 part 1.

Provisions in this Chapter is not intended for application to aeroplanes having short take-off and landing (STOL) or vertical take-off and landing (VTOL) capabilities.

### (b) Small Aeroplanes

Operators of small aeroplanes shall comply with National code of performance.

### (c) Article 41 of the Convention

For reference purposes Article 41 of the Convention is reproduced below.

#### *Recognition of existing standards of airworthiness*

*The provisions of this Chapter shall not apply to aircraft and aircraft equipment of types of which the prototype is submitted to the appropriated national Authorities for certification prior to a date three years after the date of adoption of an International Standard of airworthiness for such equipment.*



## 9.1 General

Operator's statement to comply with following.

- (a) All aeroplanes shall be operated in accordance with National code of performance established by the DGCA.

In addition, compliance with IS 014 (Requirements for operating limitations of aircraft used for commercial transport operations) and Attachment B to ICAO Annex 6 is required.

- (b) All aeroplane shall be operated in compliance with the terms of its certificate of airworthiness and within the approved operating limitations contained in its flight manual.

*Note 1: The procedures scheduled in the flight manual should be followed except where operational circumstances require the use of modified procedures in order to maintain the intended level of safety.*

*Note 2: Compliance with this Chapter should be established using performance data in the flight manual and in accordance with other applicable operating requirements. In no case should the limitations in the flight manual be exceeded. However, additional limitations may be applied when operational conditions not included in the flight manual are encountered. The performance data contained in the flight manual may be supplemented with other data acceptable to the DGCA, if necessary to show compliance.*

*Note 3: The provisions of this Chapter should be complied with, unless deviations there from are specifically authorized by the DGCA on the grounds that the special circumstances of a particular case make a literal observance of these provisions unnecessary for safety.*

*Note 4: See the Airworthiness Manual (ICAO Doc 9760) for the related airworthiness performance guidance material.*

## 9.2 Operators instructions to ensure compliance with following paragraph (including compliance with paragraph 9.3 to 9.10 required).

A flight shall not be commenced unless the performance information provided in the flight manual, supplemented as necessary with other data acceptable to the DGCA, indicates that following paragraphs (9.3 to 9.10) can be complied with for the flight to be undertaken.

## 9.3 In complying with paragraph 9.2, account shall be taken of all factors that significantly affect the performance of the aeroplane, including but not limited to:

- (a) The mass of the aeroplane, the operating procedures, the pressure altitude appropriate to the elevation of the aerodrome, the ambient temperature, the wind,



the runway slope, and surface conditions of the runway i.e., presence of snow, slush, water, and/or ice for landplanes, water surface condition for seaplanes.

- (b) Such factors shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which may be provided in the performance data supplied by the manufacturer, IS 014 or in the National code of performance.

#### 9.4 Mass limitations

- (a) The mass of the aeroplane at the start of take-off shall not exceed the mass at which paragraph 9.5 is complied with, nor the mass at which paragraph 9.8, 9.9 and 9.10 are complied with, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is envisaged in applying paragraph 9.8 and 9.9 and, in respect of alternate aerodromes, paragraph 9.4 and 9.10.
- (b) In no case shall the mass at the start of take-off exceed the maximum take-off mass specified in the flight manual for the pressure-altitude appropriate to the elevation of the aerodrome, and, if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition.
- (c) In no case shall the estimated mass for the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the maximum landing mass specified in the flight manual for the pressure-altitude appropriate to the elevation of those aerodromes, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.
- (d) In no case shall the mass at the start of take-off, or at the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the relevant maximum masses at which compliance has been demonstrated with the applicable noise certification Standards in IS 081, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the competent authority of the State in which the aerodrome is situated.

#### 9.5 Take-off.

- (a) No aeroplane should commence a take-off at a mass which exceeds the mass at which, in accordance with the minimum distances for take-off scheduled in the flight manual, compliance with paragraph 9.5(a) (i) to 9.5(a) (iii) inclusive is shown.
  - (i) The take-off run required should not exceed the take-off run available.
  - (ii) The accelerate-stop distance required should not exceed the accelerate-stop distance available.
  - (iii) The take-off distance required should not exceed the take-off distance available.
  - (iv) When showing compliance with paragraph 9.5 (a) the same value of V1 for the continued and discontinued take-off phases should be used.
  - (v) When showing compliance with paragraph 9.5 (a) the following parameters should be taken into account:

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- a. The pressure altitude at the aerodrome;
- b. The ambient temperature at the aerodrome;
- c. The runway surface condition and the type of the runway surface;
- d. The runway slope in the direction of the take-off;
- e. The runway slope;
- f. Not more than 50 per cent of the reported headwind component or not less than 150 per cent of the reported tailwind component; and
- g. The loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

(vi) Credit is not taken for the length of the stopway or the length of the clearway unless they comply with the relevant specifications in IS 030

- (b) The aeroplane shall be able, in the event of a critical engine failing, or for other reasons, at any point in the take-off, either to discontinue the take-off and stop within the accelerate-stop distance available, or to continue the takeoff and clear all obstacles along the flight path by an adequate vertical or horizontal distance until the aeroplane is in a position to comply with paragraph 9.8 (a) When determining the resulting take-off obstacle accountability area, the operating conditions, such as the crosswind component and navigation accuracy, must be taken into account.
- (c) In determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

## 9.6 Take-off obstacle clearance limitations

- (a) No aeroplane should commence a take-off at a mass in excess of that shown in the flight manual to correspond with a net take-off flight path which clears all obstacles either by at least a height of 10.7 m (35 ft) vertically or at least 90 m (300 ft) plus  $0.125D$  laterally, where  $D$  is the horizontal distance the aeroplane has travelled from the end of take-off distance available, except as provided in paragraph 9.6 (c ),(d),(e) inclusive.
- (b) For aeroplanes with a wingspan of less than 60 m (200 ft) a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m (200 ft), plus  $0.125D$  may be used. In determining the allowable deviation of the net take-off flight path in order to avoid obstacles by at least the distances specified, it is assumed that the aeroplane is not banked before the clearance of the net take-off flight path above obstacles is at least one half of the wingspan but not less than 15.2 m (50 ft) height and that the bank thereafter does not exceed  $15^\circ$ , except as provided in paragraph 9.6 (f). The net take-off flight path considered is for the altitude of the aerodrome and for the ambient temperature and not more than 50 per cent of the reported headwind component or not less than 150 per cent of the reported tailwind component existing at the time of take-off. The take-off obstacle accountability area defined above is considered to include the effect of crosswinds.
- (c) Where the intended track does not include any change of heading greater than  $15^\circ$ ,

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- (i) For operations conducted in VMC by day, or
- (ii) For operations conducted with navigation aids such that the pilot can maintain the aeroplane on the intended track with the same precision as for operations specified in paragraph 9.6 (c)(i),

Obstacles at a distance greater than 300 m (1 000 ft) on either side of the intended track need not be cleared.

- (d) Where the intended track does not include any change of heading greater than 15° for operations conducted in IMC, or in VMC by night, except as provided in paragraph 9.6 (c)(ii), and where the intended track includes changes of heading greater than 15° for operations conducted in VMC by day, obstacles at a distance greater than 600 m (2 000 ft) on either side of the intended track need not be cleared.
- (e) Where the intended track includes changes of heading greater than 15° for operations conducted in IMC, or in VMC by night, obstacles at a distance greater than 900 m (3 000 ft) on either side of the intended track need not be cleared.
- (f) An aeroplane may be operated with bank angles of more than 15° below 120 m (400 ft) above the elevation of the end of the take-off run available, provided special procedures are used that allow the pilot to fly the desired bank angles safely under all circumstances. Bank angles should be limited to not more than 20° between 30 m (100 ft) and 120 m (400 ft), and not more than 25° above 120 m (400 ft). Methods approved by the State of the Operator should be used to account for the effect of bank angle on operating speeds and flight path including the distance increments resulting from increased operating speeds. The net take-off flight path in which the aeroplane is banked by more than 15° should clear all obstacles by a vertical distance of at least 10.7 m (35 ft) relative to the lowest part of the banked aeroplane within the horizontal distance specified in paragraph 9.6.
- (g) The use of bank angles greater than those mentioned above shall be subject to the approval from the DGCA.
- (h) Obstacle data
  - (i) Obstacle data provided by the DGCA, shall be used by the operator to develop procedures to comply with paragraph 9.5.
  - (ii) The operator shall take account of charting accuracy when assessing compliance with paragraph 9.5.

*Note 1. See IS 031 and IS 028 for methods of presentation of certain obstacle data.*

*Note 2. ICAO Annex 6 Attachment B contains guidance on the vertical and horizontal distances that are considered adequate to show compliance with paragraph 9.5.*

## 9.7 En Route Limitations

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## General

At no point along the intended track is an aeroplane having three or more engines to be more than 90 minutes at normal cruising speed away from an aerodrome at which the distance specifications for alternate aerodromes paragraph 9.10 (d) are complied with and where it is expected that a safe landing can be made, unless it complies with paragraph 9.9 (b) (i).

**9.8 En route – one engine inoperative.**

- (a) The aeroplane shall be able, in the event of the critical engine becoming inoperative at any point along the route or planned diversions there from, to continue the flight to an aerodrome at which the paragraph 9.10 can be met, without flying below the minimum flight altitude at any point.
- (b) No aeroplane should commence a take-off at a mass in excess of that which, in accordance with the one-engine inoperative en-route net flight path data shown in the flight manual, permits compliance either with paragraph 9.8 (b) (i) or 9.8 (b) (ii) at all points along the route. The net flight path has a positive slope at 450 m (1 500 ft) above the aerodrome where the landing is assumed to be made after engine failure. The net flight path used is for the ambient temperatures anticipated along the route. In meteorological conditions where icing protection systems are to be operable, the effect of their use on the net flight path data is taken into account.
  - (i) The slope of the net flight path is positive at an altitude of at least 300 m (1 000 ft) above all terrain and obstructions along the route within 9.3 km (5 NM) on either side of the intended track.
  - (ii) The net flight path is such as to permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made in accordance with paragraph 9.10 (d), the net flight path clearing vertically, by at least 600 m (2 000 ft), all terrain and obstructions along the route within 9.3 km (5 NM) on either side of the intended track. The provisions of paragraph 9.8 (b) (ii) a to 9.8 (b) (ii) e. inclusive are applied.
    - a. The engine is assumed to fail at the most critical point along the route, allowance being made for indecision and navigational 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 satisfactory fuel reserves, if a safe procedure is used.
    - d. The aerodrome, where the aeroplane is assumed to land after engine failure, is specified in the operational flight plan, and it meets the appropriate aerodrome operating minima at the expected time of use.
    - e. The consumption of fuel and oil after the engine becomes inoperative is that which is accounted for in the net flight path data shown in the flight manual.

**9.9 En route — two engines inoperative.**

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- (a) In the case of aeroplanes having three or more engines, on any part of a route where the location of en-route alternate aerodromes and the total duration of the flight are such that the probability of a second engine becoming inoperative must be allowed for if the general level of safety implied by the Standards of this chapter is to be maintained, the aeroplane shall be able, in the event of any two engines becoming inoperative, to continue the flight to an en-route alternate aerodrome and land.
- (b) Two engines inoperative — aeroplanes with three or more engines

Aeroplanes which do not comply with paragraph 9.7 should comply with following.

- (i) No aeroplane should commence a take-off at a mass in excess of that which, according to the two-engine inoperative en-route net flight path data shown in the flight manual, permits the aeroplane to continue the flight from the point where two engines are assumed to fail simultaneously, to an aerodrome at which the landing distance specification for alternate aerodromes paragraph 9.10 (d) is complied with and where it is expected that a safe landing can be made. The net flight path clears vertically, by at least 600 m (2 000 ft) all terrain and obstructions along the route within 9.3 km (5 NM) on either side of the intended track. The net flight path considered is for the ambient temperatures anticipated along the route. In altitudes and meteorological conditions where icing protection systems are to be operable, the effect of their use on the net flight path data is taken into account.
- (ii) The following provisions (a to e) shall also apply.
- The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is at more than 90 minutes at normal cruising speed away from an aerodrome at which the landing distance specification for alternate aerodromes paragraph 9.10 (d) is complied with and where it is expected that a safe landing can be made.
  - The net flight path has a positive slope at 450 m (1 500 ft) above the aerodrome where the landing is assumed to be made after the failure of two engines.
  - Fuel jettisoning is permitted to an extent consistent with sub paragraph (d) below, if a safe procedure is used.
  - The aeroplane mass at the point where the two engines are assumed to fail is considered to be not less than that which would include sufficient fuel to proceed to the aerodrome and to arrive there at an altitude of at least 450 m (1 500 ft) directly over the landing area and thereafter to fly for 15 minutes at cruise power and/or thrust.
  - The consumption of fuel and oil after the engines become inoperative is that which is accounted for in the net flight path data shown in the flight manual.

#### **9.10Landing.**

- (a) The aeroplane shall, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be



able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

(b) Aerodrome of destination — dry runways

- (i) No aeroplane should commence a take-off at a mass in excess of that which permits the aeroplane to be brought to a full stop landing at the aerodrome of intended destination from 15.2 m (50 ft) above the threshold.
  - a. For turbo jet powered aeroplanes, within 60 per cent of the landing distance available; and
  - b. For turbo-propeller aeroplanes, within 70 per cent of the landing distance available.
- (ii) The mass of the aeroplane is assumed to be reduced by the mass of the fuel and oil expected to be consumed in flight to the aerodrome of intended destination. Compliance is shown with paragraph a. (below) and with either paragraph b. (below) or paragraph c. (below).
  - a. It is assumed that the aeroplane is landed on the most favorable runway and in the most favorable direction in still air.
  - b. It is assumed that the aeroplane is landed on the runway which is the most suitable for the wind conditions anticipated at the aerodrome at the time of landing, taking due account of the probable wind speed and direction, of the ground handling characteristics of the aeroplane, and of other conditions (i.e. landing aids, terrain).
  - c. If full compliance with paragraph b. (above) is not shown, the aeroplane may be taken off if a destination alternate aerodrome is designated which permits compliance with 9.10 (d).
- (iii) When showing compliance with paragraph 9.10 (b) (i) at least the following factors should be taken into account.
  - a. The pressure altitude of the aerodrome;
  - b. The runway slope in the direction of the landing if greater than +/- 2.0 per cent; and
  - c. Not more than 50 per cent of the headwind component or not less than 150 per cent of the tailwind component.

(c) Aerodrome Of Destination — Wet Or Contaminated Runways

- (i) 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 should be at least 115 per cent of the required landing distance determined in accordance with paragraph 9.10 (b).



- (ii) A landing distance on a wet runway shorter than that required by paragraph 9.10(c)(i) above but not less than that required by paragraph 9.10 (b) may be used if the flight manual includes specific additional information about landing distance on wet runways.
- (iii) 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 should be the greater of;
  - a. The landing distance determined in accordance with paragraph 9.10 (c) (i); or
  - b. The landing distance determined in accordance with contaminated landing distance data with a safety margin acceptable to the DGCA.
  - c. If compliance with 9.10 (c) (iii) above is not shown, the aeroplane may take off if a destination alternate aerodrome is designated for which compliance is shown with 9.10 (c) (iii) above and 9.10 (d).
  - d. When showing compliance with 9.10 (c) (ii) and 9.10 (c) (iii), the criteria of 9.10 (b) should be applied accordingly. However, 9.10 (b) (i) a. and 9.10 (b) (i) b. need not be applied to the wet and contaminated runway landing distance determination required by 9.10 (c) (ii) and 9.10 (c) (iii).

(d) Destination Alternate Aerodrome

No aerodrome should be designated as a destination alternate aerodrome unless the aeroplane, at the mass anticipated at the time of arrival at such aerodrome, can comply with 9.10 (b) and either 9.10 (c) (i) or 9.10 (c) (ii), in accordance with the landing distance required for the altitude of the alternate aerodrome and in accordance with other applicable operating requirements for the alternate aerodrome.

(e) Performance considerations before landing

The operator should provide the flight crew with a method to ensure that a full stop landing, with a safety margin acceptable to the DGCA, that is at least the minimum specified in the Type Certificate holder's aircraft flight manual (AFM), or equivalent, can be made on the runway to be used in the conditions existing at the time of landing and with the deceleration means that will be used.



## Chapter - 10 OPERATING PROCEDURES

### 10.1 Flight preparation instructions (As applicable to the operation).

#### 10.1.1 Operational certification and supervision (IS 013,2).

- (a) The AOC - An applicant shall not engage in commercial air transport operations unless in possession of a valid Air Operator Certificate issued by the DGCA.
- (b) The AOC issued by the DGCA, shall authorize the operator to conduct commercial air transport operations in accordance with the operations specifications.

Note – Provisions for the content of the AOC and its associated ops specs are contained in 2.1.5 and 2.1.6 of SLCAP 4100.

#### 10.1.2 Operating Facilities (IS 013, 1).

- (a) A holder of an AOC, shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities available and directly required on such flight, for the safe operation of the aeroplane and the protection of the passengers, are adequate for the type of operation under which the flight is to be conducted and are adequately operated for this purpose.

*Note. — “Reasonable means” is intended to denote the use, at the point of departure, of information available to the operator either through official information published by the aeronautical information services or readily obtainable from other sources.*

- (b) A holder of an AOC shall ensure that any inadequacy of facilities observed in the course of operations, is reported to the authority responsible for them, without undue delay.
- (c) Subject to their published conditions of use, aerodromes and their facilities shall be kept continuously available for flight operations during their published hours of operations, irrespective of weather conditions.
- (d) A holder of an AOC shall, as part of its Safety Management System, assess the level of Rescue And Firefighting Service (RFFS) protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aeroplane intended to be used.

Note – Gazette notification number 1882/49, 03rd October 2014 & Gazette notification number 2065/38, 05<sup>th</sup> April 2018 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM Doc 9859), and State Safety Program SLCAP 2600.

Information related to the level of RFFS protection that is deemed acceptable by the operator shall be contained in the Operations Manual.

Note – Appendix 1 of IS 013 contains guidance on assessing an acceptable level of RFFS protection at aerodromes. It is not intended that this guidance limit or regulate



the operation of an aerodrome. The assessment performed by the operator does not in any way affect the RFFS requirements of IS 030, for aerodromes.

10.1.3 Minimum Flight Altitudes (IS 013, 2.7 & IS 026):

- (a). A description of the method of determination and application of minimum flight altitudes including
  - (i) A procedure to establish the minimum altitudes/flight levels for VFR flights; and
  - (ii) A procedure to establish the minimum altitudes/flight levels for IFR flights.
- (b). Operator's procedure to comply with following if applicable.

Operator may establish minimum flight altitudes for those routes flown for which minimum flight altitudes have been established by the State flown over or the responsible State, provided that they are not less than those established by that State.

- (c). The operator's procedures by which it is intended to determine minimum flight altitudes for operations conducted over routes for which minimum flight altitudes have not been established by the State flown over or the responsible State. The minimum flight altitudes determined in accordance with the above method shall not be lower than specified in IS 013, 2.7 and IS 026

10.1.4 Criteria and responsibilities for the authorization of the use of aerodromes

Taking into account the applicable requirements in SLCAP 4500 and directives issued by the DGCA.

10.1.5 Alternate Aerodromes

Operator's procedures to ensure following.

- (a) Take-off alternate aerodrome (IS 013, 3.4.1)
  - (i) A take-off alternate aerodrome shall be selected and specified in the operational flight plan if either the meteorological conditions at the aerodrome of departure are below the operator's established aerodrome landing minima for that operation or it would not be possible to return to the aerodrome of departure for other reasons.
  - (ii) The take-off alternate aerodrome shall be located within the following flight time from the aerodrome of departure:
    - a. for aeroplanes with two engines, one hour of flight time at a one-engine-inoperative cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or
    - b. for aeroplanes with three or more engines, two hours of flight time at an all engines operating cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or



- c. for aeroplanes engaged in extended diversion time operations (EDTO) where an alternate aerodrome meeting the distance criteria of a) or b) is not available, the first available alternate aerodrome located within the distance of the operator's approved maximum diversion time considering the actual take-off mass.

(iii) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

(b) En-route alternate aerodromes

- (i) En-route alternate aerodromes (one engine in operative)

Procedure as required in paragraph 9.8 (b) (ii) (d) is to be included here.

- (ii) En-route alternate aerodromes, procedure required for extended range operations to be included in paragraph 10.5.1. & 10.6

(c) Destination Alternate Aerodromes (IS 013, 3.4.3)

For a flight to be conducted in accordance with the instrument flight rules, at least one destination alternate aerodrome shall be selected and specified in the operational and ATS flight plans, unless:

- (i) the duration of the flight from the departure aerodrome, or from the point of in-flight re-planning, to the destination aerodrome is such that, taking into account all meteorological conditions and operational information relevant to the flight, at the estimated time of use, a reasonable certainty exists that:
  - a. the approach and landing may be made under visual meteorological conditions; and
  - b. separate runways are usable at the estimated time of use of the destination aerodrome with at least one runway having an operational instrument approach procedure; or
- (ii) The aerodrome is isolated. Operations into isolated aerodromes do not require the selection of a destination alternate aerodrome(s) and shall be planned in accordance with (IS-013, 3.6.3 D & 3.4.3.1 B);
  - a. for each flight into an isolated aerodrome a point of no return shall be determined; and
  - b. A flight to be conducted to an isolated aerodrome shall not be continued past the point of no return unless a current assessment of meteorological conditions, traffic and other operational conditions indicate that a safe landing can be made at the estimated time of use.

Note 1. — Separate runways are two or more runways at the same aerodrome configured such that if one runway is closed, operations to the other runway(s) can be conducted.



Note 2. — Guidance on planning operations to isolated aerodromes is contained in the Flight Planning and Fuel Management (FPFM) Manual (Doc 9976).

- (iii) Two destination alternate aerodromes shall be selected and specified in the operational and ATS flight plans when, for the destination aerodrome:
  - a. meteorological conditions at the estimated time of use will be below the operator's established aerodrome operating minima for that operation; or
  - b. Meteorological information is not available
- (d) Notwithstanding the provisions in (a), (b) and (c), the DGCA, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve operational variations to alternate aerodrome selection criteria. The specific safety risk assessment shall include at least the:
  - (i) capabilities of the operator;
  - (ii) overall capability of the aeroplane and its systems;
  - (iii) available aerodrome technologies, capabilities and infrastructure;
  - (iv) quality and reliability of meteorological information;
  - (v) identified hazards and safety risks associated with each alternate aerodrome variation; and
  - (vi) Specific mitigation measures.

Note.— Guidance on performing a safety risk assessment and on determining variations, including examples of variations, is contained in the Flight Planning and Fuel Management (FPFM) Manual (Doc 9976) and the Safety Management Manual (SMM) (Doc 9859).

#### 10.1.6 Methods For Establishing Of Aerodrome Operating Minima (IS 013, 2.8)

- (a) Operator's method for establishing aerodrome operating minima for IFR flights

Reference must be made to procedures for the determination of the visibility and / or runway visual range and for the applicability of the actual visibility observed by pilots, the reported visibility and the reported runway visual range.

When establishing aerodrome operating minima, which will apply to any particular operation the operator shall take full account of:

- (i) The type, performance and handling characteristics of the aeroplane;
- (ii) The composition of the flight crew, their competence and experience;
- (iii) The dimensions and characteristics of the runways which may be selected for use;



- (iv) The adequacy and performance of the available visual and non-visual ground aids;
- (v) The equipment available on the aeroplane for the purpose of navigation and/or control of the flight path during the approach to landing and the missed approach;
- (vi) The obstacles in the approach and missed approach areas and the obstacle clearance altitude/height for the instrument approach procedures;
- (vii) The means used to determine and report meteorological conditions;
- (viii) The obstacles in the climb-out areas and necessary clearance margins.

Note 1: The use of Head Up Display (HUD) or Enhanced Vision Systems (EVS) may allow operations with lower visibilities than normally associated with the aerodrome operating minima.

Note 2: When establishing aerodrome operating minima the operator shall be guided by SLCAP 4510 "Manual of All Weather Operations"

(b) Aerodrome Operating Minima For Each Aerodrome To Be Used

The Operator shall establish aerodrome operating minima for each aerodrome to be used in operations. Such minima shall not be lower than any that may be established for such aerodromes by the State in which the aerodrome is located.

(c) Operator's Procedure To Ensure Following.

- (i) To conduct Category II and Category III instrument approach and landing operations RVR information is required
  - (ii) For instrument approach and landing operations, aerodrome operating minima below 800 m visibility is not authorized unless RVR information is available.
- (d) The operating minima for 2D instrument approach operations using instrument approach procedures shall be determined by establishing a minimum descent altitude (MDA) or minimum descent height (MDH), minimum visibility and, if necessary, cloud conditions.

Note.— For guidance on applying a continuous descent final approach (CDFA) flight technique on non-precision approach procedures, refer to PANS-OPS (Doc 8168), Volume I, Part I, Section 4, Chapter 1, 1.7.

- (e) The operating minima for 3D instrument approach operations using instrument approach procedures shall be determined by establishing a decision altitude (DA) or decision height (DH) and the minimum visibility or RVR.

10.1.7 Determination Of The Quantities Of Fuel, Oil And Water Methanol Carried (IS 013, 2.10).

(a) Fuel and oil supply

The Operator's policy to ensure following.

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All aeroplanes.

A flight shall not be commenced unless, taking into account both the meteorological conditions and any delays that are expected in flight, the aeroplane carries sufficient fuel and oil to ensure that it can safely complete the flight.

In addition, a reserve shall be carried to provide for contingencies.

(Refer Note 1, Note 2, Note 3, and Note 4 below for applicable requirements which must be complied with).

- (b) The method by which the quantities of water methanol to be carried are determined and monitored in flight.
- (c) The operator's system for maintaining fuel and oil records in compliance with following.
  - (i) An Operator shall maintain fuel and oil records to enable the CAASL to ascertain that, for each flight the requirements of paragraph 10.1.7 has been complied with.
  - (ii) The operator shall maintain oil records to enable the CAASL to ascertain that trends for oil consumption are such that an aeroplane has sufficient oil to complete each flight.
  - (iii) Fuel and oil records shall be retained by the Operator for one year.

*Note 1:*

***Piston-engine aeroplanes.***

*The fuel and oil carried in order to comply with 10.1.7 (a) shall, in the case of piston-engine aeroplanes, be at least the amount sufficient to allow the aeroplane:*

- (i) *When a destination alternate aerodrome is required, either:*
  - a. *To fly to the aerodrome to which the flight is planned thence to the most critical (in terms of fuel consumption) alternate aerodrome specified in the operational and ATS flight plans and thereafter for a period of 45 minutes; or*
  - b. *To fly to the alternate aerodrome via any predetermined point and thereafter for 45 minutes, provided that this shall not be less than the amount required to fly to the aerodrome to which the flight is planned and thereafter for:*
    - 1 - *45 minutes plus 15 per cent of the flight time planned to be spent at the cruising level(s), or*
    - 2 - *Two hours, Whichever is less.*
- (ii) *When a destination alternate aerodrome is not required:*
  - a. *In terms of paragraph 10.1.5 (c)(i), to fly to the aerodrome to which the flight is planned and thereafter for a period of 45 minutes; or*



- b. *In terms of paragraph 10.1.5 (c)(ii), to fly to the aerodrome to which the flight is planned and thereafter for:*
- 1 - *45 minutes plus 15 per cent of the flight time planned to be spent at the cruising level(s), or*
  - 2 - *Two hours, Whichever is less.*

*Note 2:*

***Turbine-engine aeroplanes.***

*The fuel and oil carried in order to comply with 10.1.7(a) shall, in the case of turbine-engine aeroplanes, be at least the amount sufficient to allow the aeroplane:*

*(i) When a destination alternate aerodrome is required, either:*

- a. *To fly to and execute an approach, and a missed approach, at the aerodrome to which the flight is planned, and thereafter:*
- 1 - *To fly to the alternate aerodrome specified in the operational and ATS flight plans; and then*
  - 2 - *To fly for 30 minutes at holding speed at 450 m (1 500 ft) above the alternate aerodrome under standard temperature conditions, and approach and land; and,*
  - 3 - *To have an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of any of the potential contingencies specified by the operator to the satisfaction of the DGCA; or*
  - 4 - *To fly to the alternate aerodrome via any predetermined point and thereafter for 30 minutes at 450 m (1 500 ft) above the alternate aerodrome, due provision having been made for an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of any of the potential contingencies specified by the operator to the satisfaction of the DGCA ; provided that fuel shall not be less than the amount of fuel required to fly to the aerodrome to which the flight is planned and thereafter for two hours at normal cruise consumption.*

*(ii) When a destination alternate aerodrome is not required:*

- a. *In terms of paragraph 10.1.5 (c)(i), to fly to the aerodrome to which the flight is planned and additionally:*
- 1 - *To fly 30 minutes at holding speed at 450 m (1 500 ft) above the aerodrome to which the flight is planned under standard temperature conditions; and*
  - 2 - *To have an additional amount of fuel, sufficient to provide for the increased consumption on the occurrence of any of the potential contingencies specified by the operator to the satisfaction of the DGCA ; and*



- b. *In terms of paragraph 10.1.5 (c)(ii), to fly to the aerodrome to which the flight is planned and thereafter for a period of two hours at normal cruise consumption.*

**Note 3:**

*In computing the fuel and oil required in paragraph 10.1.7 (a), at least the following shall be considered:*

- (i) Meteorological conditions forecast;*
- (ii) Expected air traffic control routings and traffic delays;*
- (iii) For IFR flight, one instrument approach at the destination aerodrome, including a missed approach;*
- (iv) The procedures prescribed in the operations manual for loss of pressurization, where applicable, or failure of one or more engines while en route; and*
- (v) Any other conditions that may delay the landing of the aeroplane or increase fuel and/or oil consumption.*

**Note 4:**

*Nothing in paragraph 10.1.7 precludes amendment of a flight plan in flight in order to replan the flight to another aerodrome, provided that the requirements of paragraph 10.1.7 can be complied with from the point where the flight has been replanned.*

**Note 5:**

*Guidance on fuel supplies for supersonic aeroplanes is given in ICAO Circular 126 — Guidance Material on SST Aircraft Operations.*

**10.1.8 Instructions For Mass And Balance Control (IS 085).**

The general principles of mass and centre of gravity including:

- (a) Definitions
- (b) Methods, procedures and responsibilities for preparation and acceptance of mass and centre of gravity calculations
- (c) The policy for using either standard and/or actual masses
- (d) The method for determining the applicable passenger, baggage and cargo mass
- (e) The applicable passenger and baggage masses for various types of operations and aeroplane type



- (f) Instructions and information necessary for the completion and verification of mass and balance documentation in use (sample of mass and balance documentation in use must be included).
- (g) Last minute changes procedures
- (h) Specific gravity of fuel, oil and water methanol
- (i) Seating policy/procedures

#### 10.1.9 **ATS Flight Plan.**

Procedures and responsibilities for the preparation and submission of the air traffic services flight plan. Factors to be considered include the means of submission for both individual and repetitive flight plans.

#### 10.1.10 **Operational Flight Plan.**

- (a) Procedures and responsibilities for the preparation and acceptance of the operational flight plan. Operations manual must describe the use and contents of the operational flight plan, including samples of the operational flight plan formats in use.

- (b) Operator's Procedure shall include following.

An operational flight plan shall be completed for every intended flight. The operational flight plan shall be approved and signed by the Pilot-in-Command and, where applicable, signed by the flight operations officer, and a copy shall be filed with the operator or a designated agent, or, if these procedures are not possible, it shall be left with the aerodrome authority or on record in a suitable place at the point of departure.

#### 10.1.11 Meteorological Information (IS 013, 4.3).

Operator's procedures to ensure following.

- (a) Aircraft observations and reports

Meteorological observations to be made by operator's aircraft, operating on international air routes and for the recording and reporting of these observations.

- (i) Types of aircraft observations.

The following aircraft observations shall be made:

- a. Routine aircraft observations during en-route and climb-out phases of the flight; and
- b. Special and other non-routine aircraft observations during any phase of the flight.

*Note: Operator's procedures, to be in compliance with "Attachment to IS 042 (Meteorological Service for International Air Navigation) Chapter 5".*



(b) Special aircraft observations

Special observations to be made by all aircraft whenever the following conditions are encountered or observed.

- (i) Severe turbulence; or
- (ii) Severe icing; or
- (iii) Severe mountain wave; or
- (iv) Thunderstorms, without hail, that are obscured, embedded, widespread or in squall lines; or
- (v) Thunderstorms, with hail, that are obscured, embedded, widespread or in squall lines; or
- (vi) Heavy dust storm or heavy sandstorm; or
- (vii) Volcanic ash cloud; or
- (viii) Pre-eruption volcanic activity or a volcanic eruption.

*Note: Pre-eruption volcanic activity in this context means unusual and/or increasing volcanic activity which could presage a volcanic eruption.*

(c) Other non-routine aircraft observations

When other meteorological conditions not listed under paragraph 10.1.10 (b), e.g. wind shear, are encountered and which, in the opinion of the pilot-in-command, may affect the safety or markedly affect the efficiency of other aircraft operations, the pilot-in-command shall advise the appropriate air traffic services unit as soon as practicable.

*Note 1: Icing, turbulence and, to a large extent, wind shear are elements which, for the time being, cannot be satisfactorily observed from the ground and for which in most cases aircraft observations represent the only available evidence.*

*Note 2: All reportable incidents mentioned above shall be forwarded to DGCA in compliance to IS 006 Aviation Occurrences Reporting System.*

(d) Reporting of aircraft observations during flight

- (i) Aircraft observations shall be reported by air-ground data link. Where air-ground data link is not available or appropriate, aircraft observations during flight shall be reported by voice communications.
- (ii) Aircraft observations shall be reported during flight at the time the observation is made or as soon thereafter as is practicable.
- (iii) Aircraft observations shall be reported as air-reports.

(e) Interpretation of meteorological information

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Explanatory material on the decoding of MET forecasts and MET reports relevant to the area of operations, including the interpretation of conditional expressions.

#### 10.1.12 Operator's Maintenance Control Manual

*Note:*

*The operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance control manual, approved by Director General of Civil Aviation in accordance with the requirements of IS 017. The design of the Manual shall observe Human Factors principles.*

*Copies of all amendments to the operator's maintenance control manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.*

##### **(a) Operator's Maintenance Control Manual (IS 017, 2)**

The operator's Maintenance Control Manual provided in accordance with IS 017, 2, which may be issued in separate parts, shall contain the following information:

- a) a description of the procedures required by IS 017, including, when applicable:
  - 1) a description of the administrative arrangements between the operator and the approved maintenance organization;
  - 2) a description of the maintenance procedures and the procedures for completing and signing a maintenance release when maintenance is based on a system other than that of an approved maintenance organization
- b) names and duties of the person or persons required by IS 017,1.4;
- c) a reference to the maintenance programme required IS 017, 3.1;
- d) a description of the methods used for the completion and retention of the operator's maintenance records required by IS 017,4;
- e) a description of the procedures for monitoring, assessing and reporting maintenance and operational experience required by IS 017,5.1;
- f) a description of the procedures for complying with the service information reporting requirements of Annex 8, Part II, 4.2.3 f) and 4.2.4;
- g) a description of procedures for assessing continuing airworthiness information and implementing any resulting actions, as required by IS 017,5.2;



- h) a description of the procedures for implementing action resulting from mandatory continuing airworthiness information;
- i) a description of establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance programme, in order to correct any deficiency in that programme;
- j) a description of aircraft types and models to which the manual applies;
- k) a description of procedures for ensuring that unserviceability affecting airworthiness are recorded and rectified; and
- l) a description of the procedures for advising the State of Registry of significant in-service occurrences.

**Note.** – Refer Operator's Maintenance Control Manual, refer SLCAIS 080, Subpart F "Maintenance Organization", Subpart G, M.A. 704 "Continuing Airworthiness Management Exposition" & SLCAIS 056, 145.A.70 "Maintenance Organization Exposition"

**(b) Operator's Procedure To Ensure That; (IS 17, 2)**

- a. Applicable flight operations personnel are issued with a copy of the Maintenance Control Manual.
- b. Amendments are provided to applicable manual holders

**10.1.13 Operator's Maintenance program (IS 017, 3)**

*Note:*

*The operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance program, approved by the Director General of Civil Aviation, containing the information required by IS 017. The design and application of the operator's maintenance program shall observe Human Factors principles.*

*Copies of all amendments to the maintenance program shall be furnished promptly to all organizations or persons to whom the maintenance program has been issued.*

- (a) Operator's procedure to ensure that;
  - (i) Applicable flight operations personnel are issued with a copy of the Maintenance program
  - (ii) Amendments are provided to applicable manual holders

**10.1.14 Continuing Airworthiness Information (IS 017, 5)**

*Note:*

*The operator of an aeroplane over 5700 kg maximum certificated take-off mass shall monitor and assess maintenance and operational experience with respect to*



*continuing airworthiness and provide the information as specified by the Director General of Civil Aviation and report through the system specified in ICAO Annex 8, Part II, Standard 4.2.3 (f) and 4.2.4.*

(a) Operator's procedure to ensure above requirement.

(b) Modifications And Repairs

All modifications and repairs shall comply with airworthiness requirements acceptable to the DGCA. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

**Note.** – refer SLCAIS 080, M.A. 304 “Data for Modifications and Repairs”

#### 10.1.15 Maintenance Release (IS 017, 8)

Operator's procedure to ensure following.

- (a) Requirement for a maintenance release to be completed prior to each flight and signed to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data and the procedures described in Operator's aircraft technical log which is a part of the Civil Aviation Authority, Sri Lanka approved maintenance organization's procedures manual.
- (b) A maintenance release shall contain a certification including:
  - (i) Basic details of the maintenance carried out including detailed reference of the approved data used;
  - (ii) The date such maintenance was completed;
  - (iii) When applicable, the identity of the approved maintenance organization; and
  - (iv) The identity of the person or persons signing the release.

#### 10.1.16 Operator's Aeroplane Technical Log Or Equivalent Document. (IS 020, 1)

The responsibilities and the use of the operator's aeroplane technical log must be described, including samples of the format used.

#### 10.1.17 Use of the Minimum Equipment List (MEL) and Configuration Deviation List (CDL). (IS-15, 1.3 & SLCAP 4215)

- (a) Operator's Policy on the use of MEL and CDL
- (b) Each aircraft is required to have an operator produced MEL (Refer to operations Manual Part B Chapter 9).

#### 10.1.18 Journey log book (IS 20, 4)

Operator's procedures to ensure following.

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- (a) The aeroplane journey log book shall contain the following items and the corresponding roman numerals:

I	Aeroplane nationality and registration.
II	Date.
III	Names of crew members.
IV	Duty assignments of crew members.
V	Place of departure.
VI	Place of arrival.
VII	Time of departure.
VIII	Time of arrival.
IX	Hours of flight.
X	Nature of flight (Private, aerial work, scheduled or non-scheduled).
XI	Incidents, observations, if any.
XII	Signature of person in charge.

- (b) Entries in the journey log book should be made currently and in ink or indelible pencil.
- (c) Completed journey log book should be retained to provide a continuous record of the last one year operations.

#### 10.1.19 Operational Control And Flight Dispatch Procedure (IS 028)

- (a) Flight dispatch from main base
- (b) Flight dispatch from line stations

Operator's procedures to include

- (i) Method of obtaining preflight aeronautical information essential for safety, regularity and efficiency of air navigation of the flight
- (ii) Provisioning or preparation and dissemination of NOTAM .
- (iii) Provisioning or preparation and dissemination of the information contained in the Aeronautical Information Publication (AIP).
- (iv) Provisioning or preparation and dissemination of the information contained in the Aeronautical Information Regulation and Control (AIRAC).



- (v) Provisioning or preparation and dissemination of the information contained in the Aeronautical Information Circular (AIC) or equivalent document.
- (vi) Method of obtaining weather data
- (vii) Emergency situations
- (viii) Communication procedures

#### 10.1.20 Flight Following (Monitoring) Procedure

The operator's flight following requirement and procedures shall be clearly identified.

#### 10.1.21 Operator's Emergency Response Plan (IS -046, 1.7.1.)

Operators Emergency Response plan and to include following.

- (a) Distribution of duties, responsibility and authority to Company personnel. Clear delineation of functional tasks and lines of reporting must be shown.
- (b) Disable aircraft removal program
- (c) Assistance to aircraft accident victims and their families (refer to ICAO circular 285 for guidance)

#### 10.1.22 List Of Documents, Forms And Additional Information To Be Carried In The Aeroplane. (IS 20, Appendix 1)

The required documents must include;

- (a) Prior to flight, each aeroplane shall carry a certified true copy of the air operator certificate, and a copy of the operations specifications relevant to the aeroplane type (including leased aircraft), issued in conjunction with the certificate. When the certificate and the associated operations specifications are issued in a language other than English, an English translation shall be included. Ref - IS 015, General, 1.2.
- (b) Prior to flight, each aeroplane shall carry a certified true copy of the transfer agreement of supervisory functions and duties pursuant to Article 83 *bis* of the Chicago Convention.
- (c) Current documents of following. Ref – IS 015, General, 1.5.
  - (i) Certificate of Registration
  - (ii) Certificate of Airworthiness
  - (iii) Duly completed copy of lease agreement in respect of lease aircraft.
  - (iv) Certificate of Insurance
  - (v) Airplane Flight Manual (AFM)
  - (vi) Copy of the AOC, certified true by the DGCA.



(vii) Minimum Equipment List (MEL)/ Configuration Deviation List (CDL)

(viii) Weight and Balance manual

(ix) Flight Operations Manual (FOM)

(x) Journey log book

(xi) Technical Log

(xii) Radio License

(xiii) Noise certificate

(xiv) DG Emergency response guide

(xv) Pilot Licenses

(xvi) Passenger Manifest

(xvii) Cargo Manifest

#### 10.1.23 Document Storage Periods

Operator's procedure for the preservation and storage of records

(a) Refer Appendix 2 to this manual for required storage periods.

(b) The documents shall be kept in safe custody and made available to the DGCA whenever required.

#### 10.1.24 Aeroplane Flight Manual

(a) Operator's procedure to ensure that each aeroplane to have a current aeroplane flight manual on board prior to each flight (IS 20, Appendix 1).

(b) Operator's procedure to ensure that the flight manual is updated by implementing changes made mandatory or approved by the DGCA.

#### 10.1.25 An Aeroplane Shall Carry

- a. The Operations Manual prescribed in paragraph 2.3 of IS 013, or those parts of it that pertain to flight operations.
- b. The flight manual for the aeroplane, or other documents containing performance data required for the application of IS 014 and any other information necessary for the operation of the aeroplane within the terms of its certificate of airworthiness, unless these data are available in the operations manual, and
- c. Current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted. Ref – IS 015, 2.3



## 10.2 Ground Handling Arrangements, Procedures And Instructions (IS 046)

*Note:*

*In the event, the air operator is not the designated Ground Handling Agent who has been duly authorized by the DGCA to provide ground handling services at an airport, the air operator shall enter into agreements with the designated Ground Handling Agent of each airport to which the operations are conducted to/from, for obtaining of requisite ground handling services and the following details of such arrangements shall be provided.*

- (i) Airport Name,*
- (ii) City and the Country of the Airport*
- (iii) Name of Ground Handling Agent, Address and contact details*
- (iv) Reference of the Ground Handling Agreement (Reference Number, date)*

### 10.2.1 Operator's Ground Handling Organization

- (a) Operator's organizational structure which includes the responsibilities and authority for the management of all ground handling functions.
- (b) Lines of responsibilities must be clearly defined for following ground handling functions if applicable.
  - (i) Ramp Operations
  - (ii) Passenger services
  - (iii) Baggage services
  - (iv) Cabin services
  - (v) Weight and balance control
  - (vi) Ground support equipment
  - (vii) Fuel services

### 10.2.2 Operator's Policy And Procedures In Respect Of

- (a) Subcontracting policy
- (b) Handling process, procedures and practices for all ground handling operations

### 10.2.3 Operator's Policy In Respect Of Service Providers

Operator's policy in respect of service providers and to include

- (a) The Air Operator's responsibility in respect of ground handling as delegated by Civil Aviation Authority, Sri Lanka shall be retained by the operator even when any ground handling function is out sourced to a service provider.



- (b) Out sourcing of any ground handling function to a service provider shall have the approval of Civil Aviation Authority, Sri Lanka.

#### 10.2.4 Operator's Ground Handling Arrangements.

The Air Operator Ground Handling Arrangements shall include all or part of the following as may be applicable to the intended operations.

After a technical evaluation the ground handling arrangements may be accepted or approval may be granted (refer Section 4.6.1 (c)).

(a) **Ground administration and supervision**, comprising:

- (i) Representation and liaison services with local authorities or any other entity, disbursements on behalf of the airport user and provision of office space for its representatives;
- (ii) Load control, messaging and telecommunications;
- (iii) Handling, storage and administration of unit load devices;
- (iv) Any other supervision services before, during or after the flight and any other administrative service requested by the airport user.

(b) Passenger handling comprises any kind of assistance to arriving, departing, transfer or transit passengers, including checking tickets and travel documents, registering baggage and carrying it to the sorting area.

(c) Freight and mail handling comprising

- (i) For freight: handling of related documents, customs procedures and implementation of any security procedure agreed between the parties or required in the circumstances;
- (ii) For mail: handling of related documents and implementation of any security procedure between the parties or required by the circumstances.

(d) **Aircraft services**, comprising:

- (i) The external and internal cleaning of the aircraft, and the toilet and water services;
- (ii) The cooling and heating of the cabin, the removal of snow and ice, the de-icing of the aircraft;
- (iii) The rearrangement of the cabin with suitable cabin equipment, the storage of this equipment.

(e) **Aircraft maintenance**, comprising:

- (i) Routine services performed before flight;
- (ii) Non-routine services requested by the airport user;
- (iii) The provision and administration of spare parts and suitable equipment;



- (iv) The request for or reservation of a suitable parking and/or hangar space.
- (f) **Flight operations and crew administration**, comprising:
  - (i) Preparation of the flight at the departure airport or at any other point;
  - (ii) In-flight assistance, including re-dispatching if needed;
  - (iii) Post-flight activities;
  - (iv) Crew administration.
- (g) **Surface transport** comprising:
  - (i) The organization and execution of crew, passenger, baggage, freight and mail transport between different terminals of the same airport, but excluding the same transport between the aircraft and any other point within the perimeter of the same airport;
  - (ii) Any special transport requested by the airport user.
- (h) **Catering services** comprising:
  - (i) Liaison with suppliers and administrative management;
  - (ii) Storage of food and beverages and of the equipment needed for their preparation;
  - (iii) Cleaning of this equipment;
  - (iv) Preparation and delivery of equipment as well as of bar and food supplies.
- (i) **Baggage handling**  
comprising handling baggage in the sorting area, sorting it, preparing it for departure, loading it onto and unloading it from the devices designed to move it from the aircraft to the sorting area and vice versa, as well as transporting baggage from the sorting area to the reclaim area.
- (j) **Freight and mail handling** as regards:
  - (i) The physical handling of freight and mail whether incoming outgoing or being transferred, between the air terminal and the aircraft.
- (k) **Ramp handling** comprising:
  - (i) marshalling the aircraft on the ground at arrival and departure (\*);
  - (ii) assistance to aircraft parking and provision of suitable devices (\*);
  - (iii) communication between the aircraft and the air-side supplier of services (\*);

(\*) Provided that these services are not provided by the air traffic service

- (iv) The loading and unloading of the aircraft, including the provision and operation of suitable means, as well as the transport of crew and passengers between the aircraft and the terminal, and baggage transport between the aircraft and the terminal;



- (v) The provision and operation of appropriate units for engine starting;
  - (vi) The moving of the aircraft at arrival and departure, as well as the provision and operation of suitable devices;
  - (vii) The transport, loading on to and unloading from the aircraft of food and beverages.
- (l) **Fuel and oil handling**, comprising:
- (i) The organization and execution of fuelling and defuelling operations, including the storage of fuel and the control of the quality and quantity of fuel deliveries;
  - (ii) The replenishing of oil and other fluids.

#### 10.2.5 **Fuelling procedures.** (IS 013, 3.8)

A description of fuelling procedures including instructions to comply with following.

- (a) Safety precautions during refueling and defueling including when an APU is in operation or when a turbine engine is running and the prop-brakes are on;
- (b) Re fuelling and de fuelling when passengers are embarking, on board or disembarking shall not be conducted unless it is properly attended by qualified personnel ready to initiate and direct evacuation of the aeroplane by the most practical and expeditious means available;
- (c) When refueling with passengers embarking, on board or disembarking, two-way communication shall be maintained by the aeroplane's inter-communication system or other suitable means between the ground crew supervising the refueling and the qualified personnel on board the aeroplane.
- (d) Precautions to be taken to avoid mixing fuels.

*Note 1. The provisions of paragraph 10.2.5 (b) do not necessarily require the deployment of integral aeroplane stairs or the opening of emergency exits as a prerequisite to refueling.*

*Note 2. Provisions concerning aircraft refueling are contained in IS 030 and guidance on safe refueling practices is contained in the Airport Services Manual, (ICAO Doc 9137), Parts 1 and 8.*

*Note 3. Additional precautions are required when refueling with fuels other than aviation kerosene or when refueling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used.*

#### 10.2.6 **Safety On The Ramp** (IS 046)

Operator's Procedures, aimed at achieving safety whilst the aeroplane is on the ramp.

Procedures to include:

- (a) Aircraft Loading operations and securing of items in the aeroplane;
- (b) Special loads and classification of load compartments;

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- (c) Positioning of ground support equipment and passenger boarding equipment;
- (d) Aircraft handling and servicing operations
- (e) Operation of aeroplane doors;
- (f) Safety on the ramp, including fire prevention, blast and suction areas;
- (g) Start-up, ramp departure and arrival procedures including push-back, taxi , towing operations and instructions to ensure;
- (h) An aeroplane shall not be taxied on the movement area of an aerodrome unless the person at the controls:
  - a. Has been duly authorized by the operator or a designated agent;
  - b. Is fully competent to taxi the aeroplane;
  - c. Is qualified to use the radiotelephone; and
  - d. Has received instruction from a competent person in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

#### 10.2.7 Procedures for the Refusal of Embarkation.

Operators Procedures, to ensure that persons who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of drugs, are refused embarkation. This does not apply to medical patients under proper care.

#### 10.2.8 Deicing and anti-icing on the ground

De-icing and anti-icing policy and procedures for aeroplanes on the ground. These shall include descriptions of the types and effects of icing and other contaminants on aeroplanes whilst stationary, during ground movements and during take-off.

In addition, a description of the fluid types used must be given including:

- (i) Proprietary or commercial names;
- (ii) Characteristics;
- (iii) Effects on aeroplane performance;
- (iv) Hold-over times; and
- (v) Precautions during usage.

### 10.3 Flight Procedures

#### 10.3.1 VFR / IFR policy.

- (a) A description of the policy for allowing flights to be made under VFR, or IFR, or of changing from one to the other and to include;



- (i) A flight to be conducted in accordance with the visual flight rules shall not be commenced unless current meteorological reports or a combination of current reports and forecasts indicate that the meteorological conditions along the route or that part of the route to be flown under the visual flight rules will, at the appropriate time, be such as to render compliance with VFR rules possible.
  - (ii) Flight to be conducted in accordance with instrument flight rules shall not be commenced unless information is available which indicates that conditions at the aerodrome of intended landing or, where a destination alternate is required, at least one destination alternate aerodrome will, at the estimated time of arrival, be at or above the aerodrome operating minima.
- (b) Requirement for all aeroplanes operated in accordance with instrument flight rules to comply with the instrument flight procedures approved by the State in which the aerodrome is located.

#### 10.3.2 Navigation Procedures.

- (a) A list of navigational equipment to be carried by aircraft type, route and area of operation.
- (b) A description of all navigation procedures relevant to the type(s) and area(s) of operation.  
Procedures must include;
  - (i) Standard navigational procedures and to include;
    - a. Policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the aeroplane;
    - b. In-flight re-planning;
    - c. Procedures in the event of system degradation;
  - (ii) When relevant to the operation;
    - a. Long range navigation procedures

#### (c) Performance Based Navigation (PBN) (IS 024, IS 016 & SLCAP 4520)

Operator's procedures and training requirement for operations, where a navigation specification for performance-based navigation has been prescribed.

*Note 1: For operations where a navigation specification for performance-based navigation has been prescribed, the Operator shall have approval from the DGCA for operations in such airspace.*

*Note 2: Information on performance-based navigation, and guidance concerning the implementation and operational approval process, are contained in the Performance-based Navigation Manual (ICAO Doc 9613). This document also contains a comprehensive list of references to other documents produced by States and international bodies concerning navigation systems.*



**(d) Minimum Navigation Performance Specifications (MNPS) (IS 16)**

Operator's procedures and training requirement for operations where minimum navigation performance specifications (MNPS) are prescribed.

*Note 1: For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, minimum navigation performance specifications (MNPS) are prescribed, the Operator shall have approval from the DGCA for operations in such airspace.*

*Note 2: The prescribed minimum navigation performance specifications and the procedures governing their application are published in the Regional Supplementary Procedures (ICAO Doc 7030).*

**(e) Reduced Vertical Separation Minimum (RVSM) (IS 016)**

Operator's procedures for operations and training requirement where based on Regional Air Navigation Agreement, a reduced vertical separation minimum (RVSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive.

*Note 1: For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, a reduced vertical separation minimum (RVSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive, the Operator shall have approval by the DGCA, for operations in such airspace.*

*Refer ASN 095 and IS 016 for requirements for approval of Reduced Vertical Separation Minimum (RVSM).*

*Note 2: An RVSM approval is valid globally on the understanding that any operating procedures specific to a given region will be stated in the operations manual or appropriate crew guidance.*

*Note 3: Guidance material relating to the approval for operation in RVSM airspace is contained in the Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum between FL 290 and FL 410 Inclusive (ICAO Doc 9574).*

**(f) Electronic Navigation Data Management (IS 016)**

(i) Operator's procedures to ensure following.

An operator shall not employ electronic navigation data products that have been processed for application in the air and on the ground unless Civil Aviation Authority, Sri Lanka has approved the operator's procedures for ensuring that the process applied and the products delivered have met acceptable standards of integrity and that the products are compatible with the intended function of the equipment that will use them.

*Note. — Guidance relating to the processes that data suppliers may follow is contained in RTCA DO-200A/EUROCAE ED-76 and RTCA DO-201A/EUROCAE ED-77.*

(ii) Operator's procedure to ensure continues monitoring of both the process and products.



- (iii) Operator's procedures that ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aircraft that require it.

**(g) Provisioning of Charts**

Operator's procedure to ensure following.

- (i) Each aeroplane shall have prior to each departure, current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted.
- (ii) Flight Operations Officers shall have adequate Charts to discharge their duties.
- (iii) Provisioning and timely distribution and insertion of current revisions to Charts.

**10.3.3 Operation in Portions of Airspace or On Routes Where an RCP (Required Communication Performance) Type Has Been Prescribed. (IS 016)**

Operator's procedures, training requirement for operation in portions of airspace or on routes where an RCP type has been prescribed.

*Note 1: For flights in defined portions of airspace or on routes where an RCP type has been prescribed, the Operator shall have approval from Civil Aviation Authority, Sri Lanka for operations in such airspace.*

*Note 2: Information on RCP and associated procedures, and guidance concerning the approval process, are contained in the Manual on Required Communications Performance (RCP) (ICAO Doc 9869). This document also contains references to other documents produced by States and international bodies concerning communication systems and RCP.*

**10.3.4 Altimeter Setting Procedures**

- (a) Operator's Altimeter setting procedure, including use
- (b) Where appropriate, use of metric altimetry system and conversion tables
- (c) QFE operating procedures.

**10.3.5 Altitude Alerting System Procedures**

Operator's procedure, including instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude callout.

**10.3.6 In-flight fuel management (IS 013, 3.7)**

Operator's policy and procedures for in flight fuel management

**10.3.7 Flight procedures in icing conditions (IS 013, 3.5)**

Operator's instructions in respect of flight in icing condition and to include;

- (a) Flight to be operated in known or expected icing conditions shall not be commenced unless the aeroplane is certificated and equipped to cope with such conditions.
- (b) A flight to be planned or expected to operate in suspected or known ground icing conditions shall not take off unless the aeroplane has been inspected for icing and, if necessary, has been given appropriate de-icing/anti-icing treatment.



Accumulation of ice or other naturally occurring contaminants shall be removed so that the aeroplane is kept in an airworthy condition prior to take-off.

#### 10.3.8 Use Of Autopilot And Auto Throttle In IMC

Operator's instructions on the use of autopilot and auto throttle in IMC

#### 10.3.9 Aeroplane Operating Procedures For Noise Abatement (IS 013, 4.10)

- (a) Operator's Aeroplane operating procedures for noise abatement (should comply with the provisions of PANS-OPS (ICAO Doc 8168), Volume I).
- (b) Noise abatement procedures specified by an operator for any one aeroplane type should be the same for all aerodromes.

#### 10.3.10 Standard Operating Procedures (SOP) For Each Phases Of Flight (Refer ASN 067)

- (a) Operator's instructions to establish Standard Operating Procedures (SOP) which provide guidance to flight operations personnel.
- (b) Check lists for the guidance of flight operations personnel shall be integral part of SOP.
- (c) Refer to Operations Manual Part B chapter 3 for additional requirements.

#### 10.3.11 Instruction on the use of normal checklists and the timing of their use (IS 013, 2.6 & IS 015, 1.4)

Operator's instructions on the use of normal check list and the timing of their use.

Refer to Operations Manual Part B Chapter 3 for additional information.

#### 10.3.12 Instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved.

#### 10.3.13 Departure briefing (ASN 067, Appendix 17)

#### 10.3.14 Departure contingency procedures (IS 013, 3.4)

Procedures and information necessary for flight crew in case of contingency on departure, such as (not limited to):

- (a) Need for and selection of a take-off alternate
  - (i) A take-off alternate aerodrome shall be selected and specified in the operational flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.
  - (ii) The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure:
    - a. Aeroplanes having two power-units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed; and



- b. Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

(iii) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

(b) Procedures for complying with Chapter 9 of this manual

This includes the instruction for finding/computing the performance data (referring possibly to a specific instruction for use of the data, the eventual programming of the data, the standard engine-out routing in cases where no obstacle exist and the specific engine-out routing in cases where an obstacle forces an “escape route” to be followed with details of where the routing can be found (FMS, chart, text description...) and the procedure to fly the routing (bank angles, LNAV, hand flown), the acceleration height, etc.

(c) Other operational contingency procedures on departure (FMS failure, loss of com, pressurization failure, engine fire etc.)

(d) Fuel jettisoning policy where a return to departure airport is required and jettisoning area (minimum altitude, allowed area or where to find the information).

**10.3.15 Approach briefing (ASN 067, Appendix 19)**

**10.3.16 Instructions for the conduct of precision and non-precision approach procedures (IS 013, 4.9, ASN 67, Appendix 2 & SLCAP 4510 “All Weather Manual”)**

Including;

(i) Threshold crossing height for precision approaches

Operational procedures designed to ensure that an aeroplane being used to conduct 3D approaches operation crosses the threshold by a safe margin, with the aeroplane in the landing configuration and attitude.

**10.3.17 Stabilized approach procedure**

(Refer ASN 063 & SLCAP 4510).

**10.3.18 Conditions required to commence or to continue an instrument approach (IS 013, 4)**

Operator’s instructions in respect of Conditions required to commence or to continue an instrument approach and to include following.

(a) A flight shall not be continued towards the aerodrome of intended landing, unless the latest available information indicates that at the expected time of arrival, a landing can be effected at that aerodrome or at least one destination alternate aerodrome, in compliance with the operating minima established in accordance with paragraph 10.1.5.



- (b) An instrument approach shall not be continued below 300 m (1 000 ft) above the aerodrome in case of non-precision approach, unless the reported visibility or controlling RVR is at or above the aerodrome operating minima.

Note. — Criteria for the final approach segment is contained in PANS OPS (Doc 8168), Volume II.

- (c) after entering the final approach segment or after descending below 300 m (1 000 ft) above the aerodrome elevation, the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or MDA/H. In any case, an aeroplane shall not continue its approach-to-land at any aerodrome beyond a point at which the limits of the operating minima specified for that aerodrome would be infringed.

*Note— Controlling RVR means the reported values of one or more RVR reporting locations (touchdown, mid-point and stop-end) used to determine whether operating minima are or are not met. Where RVR is used, the controlling RVR is the touchdown RVR, unless otherwise specified by State criteria.*

#### **10.3.19 Allocation of flight crew duties and procedures for the management of crew work load during night and IMC instrument and landing operations**

#### **10.3.20 Procedure for familiarization with areas, routes and aerodromes (IS 018, 4.3)**

### **10.4 All Weather Operations (AWO) (IS 013, 2.8.3 & SLCAP 4510)**

#### **(Low visibility takeoff, Category II and III operations).**

A description of the operational procedures associated with All Weather Operations (Low visibility take off, Category II and III Operations).

### **10.5 ETOPS (IS 013, 7 & SLCAP 4525)**

Additional requirements for extended range operations by aeroplanes with two turbine engines (ETOPS)

#### *Note 1:*

*Unless the operation has been specifically approved by the DGCA, an aeroplane with two turbine engines shall not, except as provided in Note 2 below, be operated on a route where the flight time at single-engine cruise speed to an adequate en-route alternate aerodrome exceeds a threshold time of 60 minutes.*

#### *Note 2:*

*Any aeroplane type with two turbine engines which, prior to 25 March 1986 was authorized and operating on a route where the flight time at single-engine cruise speed to an adequate en-route alternate aerodrome exceeded the threshold time of established for such operations in accordance with Note 1), shall be permitted such an operation to continue on that route after that date on application to Civil Aviation Authority, Sri Lanka.*

#### *Note 3:*

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*Any Operator who wish operate an aeroplane with two turbine engines on a route where the flight time at single engine cruise speed to an adequate en route alternate aerodrome exceeds 60 minutes shall obtain approval from the DGCA , for that operation.*

*Note 4: RESERVED*

*Note 5.*

*Guidance on compliance with the requirements of extended range operations by aeroplanes with two turbine engines is contained in ICAO Annex 6 Attachment C.*

#### 10.5.1 ETOPS Operational procedures

- (a) Operational procedures of the Operator who wish operate an aeroplane with two turbine power units as per Note 3 above.
- (b) Operator's operational procedures shall include engine failure procedure for ETOPS and the nomination and utilization of diversion aerodromes.

#### (c) En-route alternate aerodromes

Operator's procedures shall specify that, En-route alternate aerodromes, required for extended range operations by aeroplanes with two turbine engines, shall be selected and specified in the operational and air traffic services (ATS) flight plans.

- (d) Operator's procedures shall specify that, A flight to be conducted in accordance with approved ETOPS operational procedures, shall not be commenced unless, during the possible period of arrival, the required en-route alternate aerodrome(s) will be available and the available information indicates that conditions at those aerodromes will be at or above the aerodrome operating minima approved for the operation.

### 10.6 Extended Diversion Time Operations (EDTO) (IS 013, 7 & SLCAP 4525)

#### 10.6.1 Requirements for operations beyond 60 minutes to an en-route alternate aerodrome

- (a) Operators conducting operations beyond 60 minutes from a point on a route to an en-route alternate aerodrome shall ensure that:
  - (i) for all aeroplanes:
    - a. en-route alternate aerodromes are identified; and
    - b. the most up-to-date information is provided to the flight crew on identified en-route alternate aerodromes, including operational status and meteorological conditions;
  - (ii) For aeroplanes with two turbine engines, the most up-to-date information provided to the flight crew indicates that conditions at identified en-route alternate aerodromes will be at or above the operator's established aerodrome operating minima for the operation at the estimated time of use.

Note — Guidance on compliance with the requirements of these provisions is contained in Attachment C



10.6.2 In addition to the requirements in 10.6.1. of this manual, all operators shall ensure that the following are taken into account and provide the overall level of safety intended by the provisions of Annex 6, Part I:

- (a) Operational control and flight dispatch procedures;
- (b) Operating procedures; and
- (c) Training programmes

#### 10.6.3 Requirements for EDTO

- (a) Unless the operation has been specifically approved by the DGCA, an aeroplane with two or more turbine engines shall not be operated on a route where the diversion time to an en-route alternate aerodrome from any point on the route, calculated in ISA and still-air conditions at the one-engine-inoperative cruise speed for aeroplanes with two turbine engines and at the all engines operating cruise speed for aeroplanes with more than two turbine engines, exceeds a threshold time established for such operations by that State.

Note 1. — When the diversion time exceeds the threshold time, the operation is considered to be an extended diversion time operation (EDTO).

Note 2. — Guidance on the establishment of an appropriate threshold time and on approval of extended diversion time operations is contained in Appendix-A of SLCAP 4525.

Note 3. — For the purpose of EDTO, the take-off and/or destination aerodromes may be considered en-route alternate aerodromes.

- (b) The maximum diversion time for the operator of a particular aeroplane type engaged in extended diversion time operations shall be approved by the DGCA.

Note. — Guidance on the conditions to be used when converting diversion times to distances is contained in Appendix-A of SLCAP 4525.

- (c) When approving the appropriate maximum diversion time for the operator of a particular aeroplane type engaged in extended diversion time operations, the DGCA shall ensure that:
  - (i) for all aeroplanes: the most limiting EDTO significant system time limitation, if any, indicated in the aeroplane flight manual (directly or by reference) and relevant to that particular operation is not exceeded; and
  - (ii) For aeroplanes with two turbine engines: the aeroplane is EDTO certified.

Note 1. — EDTO may be referred to as ETOPS in some documents.

Note 2. — Guidance on compliance with the requirements of this provision is contained in SLCAP 4525.

- (d) Notwithstanding the provisions in 10.6.3. C) (i), the aircraft operator shall conduct a specific safety risk assessment which demonstrates how an equivalent level of safety will be maintained and CAASL, Sri Lanka based on the results may approve operations beyond the time limits of the most time-limited system. The specific safety risk assessment shall include at least the:



- (i) Capabilities of the operator;
- (ii) Overall reliability of the aeroplane;
- (iii) Reliability of each time-limited system;
- (iv) Relevant information from the aeroplane manufacturer; and
- (v) Specific mitigation measures.

Note. — Guidance on the specific safety risk assessment is contained in Appendix-A of SLCAP 4525

- (e) For aeroplanes engaged in EDTO, the additional fuel required by 3.6.3 f) 2) of IS 013, shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by the DGCA.

Note. — Guidance on compliance with the requirements of this provision is in Appendix-A of SLCAP 4525.

- (f) A flight shall not proceed beyond the threshold time in accordance with 10.6.3. a) of this manual, unless the identified en-route alternate aerodromes have been re-evaluated for availability and the most up-to-date information indicates that, during the estimated time of use, conditions at those aerodromes will be at or above the operator's established aerodrome operating minima for the operation. If any conditions are identified that would preclude a safe approach and landing at that aerodrome during the estimated time of use, an alternative course of action shall be determined.
- (g) The DGCA shall, when approving maximum diversion times for aeroplanes with two turbine engines, ensure that the following are taken into account in providing the overall level of safety intended by the provisions of Annex 8:
  - (i) Reliability of the propulsion system;
  - (ii) Airworthiness certification for EDTO of the aeroplane type; and
  - (iii) EDTO maintenance programme.

Note 1 — The Airworthiness Manual (Doc 9760) contains guidance on the level of performance and reliability of aeroplane systems intended by 10.6.3 (g), as well as guidance on continuing airworthiness aspects of the requirements of 10.6.3. (g) of this manual.

### **10.7 Ground proximity warning system (GPWS).**

- (a) Instructions and training requirements for the avoidance of controlled flight into terrain (CFIT) (ASN 076) and policy for the use of Ground Proximity Warning System / Ground proximity warning system (IS 015 and ASN 103) which has a forward looking terrain avoidance function.
- (b) Limitations on high rates of descent near the surface.

### **10.8 Airborne Collision Avoidance System (ACAS / TCAS)**

Policy, Instructions, Procedures and training requirement for the avoidance of collisions and the use of the Airborne Collision Avoidance System.

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Operational procedures and training requirement to be in compliance with ASN 104 and ASN 066.

### **10.9 Weather Radar (IS 015, 11, IS 018, 3.1 & SLCAP 4500, Part D, Chapter 7)**

Operating Instructions and training requirement for the use of weather radar

### **10.10 Pressure altitude reporting Transponders**

Operating Instructions and training requirements for the use of Transponders

### **10.11 Forward looking wind shear warning system**

Operating Instructions and training requirements for the use of forward looking wind shear warning system

### **10.12 Oxygen supply**

#### **10.12.1 An explanation of the conditions under which oxygen must be provided and used. (IS 013,3.9 and IS 015, 7)**

The oxygen requirements specified for:

- (a) Flight crew;
- (b) Cabin crew;
- (c) Passengers.

The following Oxygen requirements must be satisfied.

- (a) A flight to be operated at flight altitudes at which the atmospheric pressure in personnel compartments will be less than 700 hPa/10000ft. shall not be commenced unless sufficient stored breathing oxygen is carried to supply:
  - (i) All crew members and 10 per cent of the passengers for any period in excess of 30 minutes that the pressure in compartments occupied by them will be between 700 hPa/10000ft and 620 hPa/13000ft; and
  - (ii) The crew and passengers for any period that the atmospheric pressure in compartments occupied by them will be less than 620 hPa/ 13000ft.
- (b) A flight to be operated with a pressurized aeroplane shall not be commenced unless a sufficient quantity of stored breathing oxygen is carried to supply all the crew members and passengers, as is appropriate to the circumstances of the flight being undertaken, in the event of loss of pressurization, for any period that the atmospheric pressure in any compartment occupied by them would be less than 700 hPa. In addition, when an aeroplane is operated at flight altitudes at which the atmospheric pressure is less than 376 hPa, or which, if operated at flight altitudes at which the atmospheric pressure is more than 376 hPa and cannot descend safely within four minutes to a flight altitude at which the atmospheric pressure is equal to 620 hPa, there shall be no less than a 10-minute supply for the occupants of the passenger compartment.



*Note.*

*Approximate altitudes in the Standard Atmosphere corresponding to the values of absolute pressure used in the above text are as follows:*

Absolute pressure	Meters	Feet
700 hpa	3000	10,000
620 hpa	4000	13,000
376 hpa	7600	25,000

#### 10.12.2 Use of oxygen (IS 013,4.6.1)

Operator's procedures to ensure that, All flight crews, when engaged in performing duties essential to the safe operation of an aeroplane in flight, to use breathing oxygen continuously whenever the circumstances prevail for which its supply has been required in paragraph 10.12.

#### 10.12.3 Oxygen mask (IS 013,4.6.2)

Operator's procedure to ensure that, All flight crews of pressurized aeroplanes operating above an altitude where the atmospheric pressure is less than 376 hPa shall have available at the flight duty station a quick-donning type of oxygen mask which will readily supply oxygen upon demand.

### 10.13 Loss of pressurization (IS 013,4.7)

Safeguarding of cabin crew and passengers in pressurized aeroplanes in the event of loss of pressurization.

Operator's procedure to ensure following.

- Cabin crew should be safeguarded so as to ensure reasonable probability of their retaining consciousness during any emergency descent which may be necessary in the event of loss of pressurization and, in addition, they should have such means of protection as will enable them to administer first aid to passengers during stabilized flight following the emergency.
- Passengers should be safeguarded by such devices or operational procedures as will ensure reasonable probability of their surviving the effects of hypoxia in the event of loss of pressurization.



*Note. — It is not envisaged that cabin crew will always be able to provide assistance to passengers during emergency descent procedures which may be required in the event of loss of pressurization.*

#### **10.14 Crew members at their stations. (IS 013, 4.5.1,4.5.2)**

(a) Instructions to comply with following.

The requirements for crew members to occupy their assigned stations or seats during the different phases of flight or whenever deemed necessary in the interest of safety;

- (i) *Take-off and landing.* All flight crews required to be on flight deck duty shall be at their stations.
- (ii) *En route.* All flight crews required to be on flight deck duty shall remain at their stations except when their absence is necessary for the performance of duties in connection with the operation of the aeroplane or for physiological needs.

(b) Procedure to ensure that each cabin crew member assigned to emergency evacuation duties occupy a seat, specially designed and allocated for cabin crew during take-off and landing and whenever the pilot-in command so directs..

#### **10.15 Use of safety belts for crew and passengers.**

(a) Instructions to comply with following.

The requirements for crew members to use safety belts and/or harnesses during the different phases of flight or whenever deemed necessary in the interest of safety.

- (i) *Seat belts.* All flight crews shall keep their seat belts fastened when at their stations. IS 013, 4.5.3
- (ii) *Safety harness.* Any flight crew occupying a pilot's seat shall keep the safety harness fastened during the take-off and landing phases; all other flight crews shall keep their safety harnesses fastened during the take-off and landing phases unless the shoulder straps interfere with the performance of their duties, in which case the shoulder straps may be unfastened but the seat belt must remain fastened. IS 013, 4.5.4

*Note. — Safety harness includes shoulder straps and a seat belt which may be used independently.*

(b) Instructions to comply with following.

Each cabin crew member shall be seated with seat belt or, when provided, safety harness fastened during take-off and landing and whenever the pilot-in-command so directs. Ref IS 021, SLCAP 4300, and 4305.

*Note.— The foregoing does not preclude the pilot-in command from directing the fastening of the seat belt only, at times other than during take-off and landing.*



- (c) Procedures to ensure that, during take-off and landing and whenever considered necessary by reason of turbulence or any emergency occurring during flight, all passengers on board an aeroplane shall be secured in their seats by means of the seat belts or harnesses provided. IS 013, 2.12.4

#### **10.16 Cabin safety requirements.**

##### **10.16.1 Cabin safety Procedures covering;**

- (a) Cabin preparation for flight, in-flight requirements and preparation for landing including procedures for securing cabin and galleys;
- (b) Procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aeroplane;
- (c) Procedures to be followed during passenger embarkation and disembarkation;
- (d) Carry - on baggage  
Procedures to ensure that all baggage carried onto an aeroplane and taken into the passenger cabin is adequately and securely stowed.

Note. – Refer IS-021, SLCAPS 4300 and 4305

##### **10.16.2 Accessible and adequate medical supplies (IS 015,2.2 (a))**

Operator's procedure to ensure following.

An aeroplane shall be equipped with accessible and adequate medical supplies that comprise with;

- (a) One or more first-aid kits for the use of cabin crew in managing incidents of ill health; and
- (b) For aeroplanes required to carry cabin crew as part of the operating crew, one universal precaution kit (two for aeroplanes authorized to carry more than 250 passengers) for the use of cabin crew members in managing incidents of ill health associated with a case of suspected communicable disease, or in the case of illness involving contact with body fluids; and
- (c) For aeroplanes authorized to carry more than 100 passengers, on a sector length of more than two hours, a medical kit, for the use of medical doctors or other qualified persons in treating in-flight medical emergencies.

*Note.*

*For more Guidance on Communicable Disease refer IS 045 & IS 015, 2.2 and Appendix-1 for Guidance on the types, number, location and contents of the medical supplies is given in IS 015, Appendix 1.*



#### 10.16.3 **Fire extinguishers** (IS 015,2.2 (b))

Operator's instructions to ensure following.

The number and type of fire extinguishers per aeroplane type shall be as agreed by Civil Aviation Authority, Sri Lanka.

Portable fire extinguishers of a type which, when discharged, will not cause dangerous contamination of the air within the aeroplane. At least one shall be located in:

- (a) The pilot's compartment; and
- (b) Each passenger compartment that is separate from the pilot's compartment and that is not readily accessible to the flight crew;

*Note.*

*Any portable fire extinguisher so fitted in accordance with the certificate of airworthiness of the aeroplane may count as one prescribed. Ref. IS 015. SLCAP 4300 and 4305*

#### 10.16.4 **Portable breathing equipment (PBE)**

The number and location of PBE per aeroplane type shall be as agreed by Civil Aviation Authority, Sri Lanka. Ref IS 021 and IS 015,2.2(h).

#### 10.17 **Passenger briefing procedures.**

- (a) The contents, means and timing of passenger briefings as per Civil Aviation Authority, Sri Lanka requirements. Ref IS-021, IS-015, and SLCAP-4300.
- (b) Procedures to ensure that passengers are made familiar with the location and use of:
  - a. Seat belts;
  - b. Emergency exits;
  - c. Life jackets, if the carriage of life jackets is prescribed;
  - d. Oxygen dispensing equipment, if the provision of oxygen for the use of passengers is prescribed;
  - e. Other emergency equipment provided for individual use, including passenger emergency briefing cards.
- (c) Procedures to inform the passengers of the location and general manner of use of the principal emergency equipment carried for collective use.
- (d) Procedures to ensure that;

In an emergency during flight, passengers shall be instructed in such emergency action as may be appropriate to the circumstances.



(e) Passenger information cards

Means of ensuring that the following information and instructions are conveyed to passengers.

- (i) When seat belts are to be fastened;
- (ii) When and how oxygen equipment is to be used if the carriage of oxygen is required;
- (iii) Restrictions on smoking;
- (iv) Location and use of life jackets or equivalent individual flotation devices where their carriage is required;
- (v) Location and method of opening emergency exits;

**10.18 Incapacitation of crew members.** (SLCAP 4500, Part D, 7.1 (q), SLCAP 4300, 3.16 & 3.17)

Procedures to be followed in the event of incapacitation of crew members in flight.

Examples of the types of incapacitation and the means for recognizing them must be included.

**10.19 Admission to flight deck.** (IS 033)

The conditions for the admission to the flight deck of persons other than the flight crew.

The policy regarding the admission of Inspectors from the Civil Aviation Authority, Sri Lanka must be included.

**10.20 Use of vacant crew seats.**

The conditions and procedures for the use of vacant crew seats.  
SLCAP 4300, chapter 1, 30 (IV), IS-033, 3.2 (a) to (d), and (2) (a)(b)(c)

**10.21 Adverse and potentially hazardous atmospheric conditions.**

Procedures for operating in, and/or avoiding adverse and potentially hazardous atmospheric conditions including:

- (a) Thunderstorms;
- (b) Icing conditions;
- (c) Turbulence;
- (d) Wind shear;
- (e) Jet stream;
- (f) Volcanic ash clouds;
- (g) Heavy precipitation;



- (h) Sand storms;
- (i) Mountain waves; and
- (j) Significant temperature inversions.

Note - The above mentioned hazardous flying conditions should be reported to the appropriate ATC unit.

#### **10.22 Wake turbulence.**

Wake turbulence separation criteria, taking into account aeroplane types, wind conditions and runway location.

#### **10.23 For aeroplanes intended to be operated above 15000 meters (49000 feet) (IS 015, 12)**

- (a) Radiation indicator

Operators procedure to ensure that all aeroplanes intended to be operated above 15 000 m (49 000 ft) shall carry equipment to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e. The total of ionizing and neutron radiation of galactic and solar origin) and the cumulative dose on each flight. The display unit of the equipment shall be readily visible to a flight crew.

The equipment shall be calibrated on the basis of assumptions acceptable to Civil Aviation Authority, Sri Lanka.

- (b) Procedures for aeroplanes operated whenever required cosmic or solar radiation detection equipment is carried.
- (c) Procedures for the use of cosmic or solar radiation detection equipment and for recording its readings
- (d) Information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation, including actions to be taken in the event that limit values specified in the Operations Manual are exceeded.
- (e) In addition, the procedures, including ATS procedures, to be followed in the event that a decision to descend or re-route is taken, covering;
  - (i) The necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional decent clearance;
  - (ii) The action to be taken in the event that communication with ATS unit cannot be established or is interrupted.
- (f) Procedure to ensure following.

For each flight of an aeroplane above 15 000 m (49 000 ft), the operator shall maintain records so that the total cosmic radiation dose received by each crew member over a period of 12 consecutive months can be determined.



**10.24 Additional requirements for single pilot operations under the Instrument Flight Rules (IFR) or at night (IS 13, 9.1, 9.2)**

Operator's procedures and instructions to ensure following.

- (a) An aeroplane shall not be operated under the IFR or at night by a single pilot unless approved by the DGCA.
- (b) An aeroplane shall not be operated under the IFR or at night by a single pilot unless:
  - (i) The flight manual does not require a flight crew of more than one;
  - (ii) The aeroplane is propeller-driven;
  - (iii) The maximum approved passenger seating configuration is not more than nine;
  - (iv) The maximum certificated take-off mass does not exceed 5700 kg;
  - (v) The aeroplane is equipped as described in paragraph 22 of IS 015.
  - (vi) The pilot-in command has satisfied requirements of experience, training, checking and recency described in 10.24(C) of this manual.
- (c) Requirements of experience, recency and training applicable to single pilot operations intended to be carried out under the IFR or at night and shall include following.

The pilot-in-command should: (IS-018, 4.5)

- (I) For operations under the IFR or at night, have accumulated at least 50 hours flight time on the class of aeroplane, of which at least 10 hours shall be as pilot in- command;
- (II) For operations under the IFR, have accumulated at least 25 hours flight time under the IFR on the class of aeroplane, which may form part of the 50 hours flight time in sub-paragraph a);
- (III) For operations at night, have accumulated at least 15 hours flight time at night, which may form part of the 50 hours flight time in sub-paragraph a);
- (IV) For operations under the IFR, have acquired recent experience as a pilot engaged in a single pilot operation under the IFR of:
  - a. At least five IFR flights, including three instrument approaches carried out during the preceding 90 days on the class of aeroplane in the single pilot role; or
  - b. An IFR instrument approach check carried out on such an aeroplane during the preceding 90 days;
- (V) For operations at night, have made at least three takeoffs and landings at night on the class of aeroplane in the single pilot role in the preceding 90 days; and



(VI) Have successfully completed training programs that include, in addition to the requirements of Operations Manual Part D Chapter 1, passenger briefing with respect to emergency evacuation, autopilot management, and the use of simplified in-flight documentation.

(VII) The initial and recurrent flight training indicated in Operations Manual Part D Chapter 1 and Pilot Proficiency Check indicated in Operations Manual Part A paragraph 6.4 shall be performed by the pilot-in-command in the single pilot role on the class of aeroplane in an environment representative of the operation.

## **10.25 Operation of single-engine aeroplanes**

Operator's instructions to ensure following. (IS 014, 1.2)

Except as provided in paragraph 10.26, single-engine aeroplanes shall only be operated in conditions of weather and light, and over such routes and diversions there from, that permit a safe forced landing to be executed in the event of engine failure.

## **10.26 Operations of single-engine turbine-powered aeroplanes at night and/or in Instrument Meteorological Conditions (IMC) (IS 14, 3 & Appendix 2)**

*Note 1: Additional requirements for approved operations by single-engine turbine-powered aeroplanes at night and/or in Instrument Meteorological Conditions (IMC) are contained in IS 014, 4.1 & 4.2.*

*Note 2: The Operator shall demonstrate the ability to conduct operations by single engine turbine powered aeroplanes at night and / or in IMC through a certification and approval process conducted by the DGCA.*

### **10.26.1 Operations Manual Requirement (IS 014, Appendix 1 & 2)**

Following is the requirement that should be included in the Operations Manual in respect of operations of single engine turbine powered aeroplanes at night or in IMC.

Operator's policy on Operations by single-engine turbine-powered aeroplanes at night and/or in IMC under following headings.

I. Standard Operating Procedures

II. Flight Dispatch Procedure

(i) Operator route planning shall take account of all relevant information in the assessment of intended routes or areas of operations, including the following:

a. The nature of the terrain to be over flown, including the potential for carrying out a safe forced landing in the event of an engine failure or major malfunction;



- b. Weather information, including seasonal and other adverse meteorological influences that may affect the flight; and
  - c. Aerodrome information and operating minima
  - d. Other criteria and limitations as specified by the DGCA.
- (ii) Operator shall identify aerodromes or safe forced landing areas available for use in the event of engine failure, and the position of these shall be programmed into the area navigation system.

*Note 1. — A ‘safe’ forced landing in this context means a landing in an area at which it can reasonably be expected that it will not lead to serious injury or loss of life, even though the aeroplane may incur extensive damage.*

*Note 2.— Operation over routes and in weather conditions that permit a safe forced landing in the event of an engine failure, as specified in Annex 6 ,Chapter 5, 5.1.2, is not required by Appendix 3, 6.1 and 6.2 for aeroplanes approved in accordance with Annex 6 ,Chapter 5, 5.4. The availability of forced landing areas at all points along a route is not specified for these aeroplanes because of the very high engine reliability, additional systems and operational equipment, procedures and training requirements specified in IS-014, 4.1*

(iii) Route Limitations Over Water (IS 014, Appendix 2, 8)

Route limitation criteria for single-engine turbine-powered aeroplanes operating at night and/or in IMC on over water operations if beyond gliding distance from an area suitable for a safe forced landing/ditching having regard to the characteristics of the aeroplane, seasonal weather influences, including likely sea state and temperature, and the availability of search and rescue services.

i. Flight Crew Experience (IS 014, Appendix 2, 7.1 & 7.2)

- (i) Minimum flight crew experience required for night/IMC operations by single-engine turbine-powered aeroplanes.

ii. Flight Crew Training Program (IS 014, Appendix 2, 7.1 & 7.2)

- (i) Operator’s flight crew training program

To be appropriate to night and/or IMC operations by single engine turbine-powered aeroplanes, covering normal, abnormal and emergency procedures and, in particular, engine failure, including descent to a forced landing in night and/or in IMC conditions.

- (ii) Flight Dispatcher training program

iii. Checking Requirement For Flight Crew And Flight Dispatchers (IS 014, Appendix 2, 7 & IS 019)

iv. Minimum Equipment List (IS 014, Appendix 2, 3 & IS 015, 1.3)

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Minimum equipment list approved in accordance with Operations Manual Part B, Chapter 9 shall specify the operating equipment required for night and/or IMC operations, and for day/VMC operations.

v. Flight Manual Information (IS 014, Appendix 2, 4)

The flight manual shall include limitations, procedures, approval status and other information relevant to operations by single-engine turbine-powered aeroplanes at night and/or in IMC.

vi. Event Reporting (IS 014, Appendix 2, 5)

Operator's procedure to comply with following.

An operator approved for operations by single-engine turbine-powered aeroplanes at night and/or in IMC shall report all significant failures, malfunctions or defects to the DGCA, who in turn will notify the State of Design.

**10.27 Operation Of Aeroplanes Equipped With Head-Up Displays (HUD) And/Or Enhanced Vision Systems (EVS) (IS 015, 24.1 & 24.2)**

- (a) Operator's procedures and training requirements for the operation of aeroplanes equipped with head-up displays (HUD) and/or enhanced vision systems (EVS)
- (b) Any use of HUD and / or EVS systems and any operational credit to be gained from their use shall have the approval from the DGCA.

*Note 1: Where aeroplanes are equipped with HUD and/or EVS, the use of such systems to gain operational benefit shall be approved by the State of the Operator.*

*Note 2: Guidance on HUD and EVS is contained in Appendix 4 of IS 015.*

**10.28 Non-revenue flights.**

Procedures and limitations for:

- (a) Training flights;
- (b) Test flights;
- (c) Delivery flights;
- (d) Ferry flights;
- (e) Demonstration flights; and
- (f) Off shore Positioning flights, including the kind of persons who may be carried on such flights.

**10.29 Mountain flying**

**10.30 Confined area and slope landing operations.**



## **Chapter - 11 DANGEROUS GOODS AND WEAPONS**

Information and instructions by the Operator, on the Safe Transport of Dangerous Goods by air, including action to be taken in the event of an emergency.

### **11.1 Operator's policy on Safe Transport of Dangerous Goods by air**

### **11.2 Operator's instructions in respect of Safe Transport of Dangerous Goods by air**

Operator's instructions, to be in conformity with IS 009 "Requirements for handling or carriage of Dangerous Goods by air" and SLCAP 4400 "Dangerous Goods Manual".

### **11.3 Weapons, munitions of war and sporting weapons**

The conditions under which weapons, munitions of war and sporting weapons may be carried and procedures to be followed.

- (a) If the operator is authorized to accept the carriage of weapons removed from passengers, the aeroplane should have provision for stowing such weapons in a place so that they are inaccessible to any person during flight time. Appropriate procedures to ensure compliance of this requirement.



## Chapter - 12 SECURITY

*In the context of this Chapter, the word “security” is used in the sense of prevention of illicit acts against civil aviation.*

The national aircraft operators with their aircraft in the registry of Sri Lanka and engaged in both domestic and international aircraft operation shall make use of these guidelines to develop the FOM security Chapter 12, Annex 6 - Standard 4.2.3.1 read with its appendix 2 which stipulate this requirement. Aircraft operator shall comply with all security procedures at each airport.

### **Definitions –**

#### **Acts of Unlawful interference:**

Acts of unlawful interference (definition given for guidance purposes). These are acts or attempted acts such as to jeopardize the safety of civil aviation, including but not limited to:

- unlawful seizure of aircraft;
- destruction of an aircraft in service;
- hostage-taking on board aircraft or on aerodromes;
- forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility;
- introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes;
- use of an aircraft in service for the purpose of causing death, serious bodily injury, or serious damage to property or the environment; and
- communication of false information such as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility.

#### **Aircraft in-flight**

An aircraft from the moment when all its external doors are closed following embarkation until the moment when such doors are opened for disembarkation.

#### **Aircraft in-service**

A parked aircraft which is under surveillance sufficient to detect unauthorized access.

#### **Aircraft not in-service:**

An aircraft that is either parked for a period of more than 12 hours or is not under surveillance sufficient to detect unauthorized access

#### **Aircraft security check:**

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An inspection of the interior of an aircraft to which passengers may have had access and an inspection of the hold for the purposes of discovering suspicious objects, weapons, explosives or other dangerous devices, articles and substances.

**Aircraft security search:**

A thorough inspection of the interior and exterior of the aircraft for the purpose of discovering suspicious objects, weapons, explosives or other dangerous devices, articles or substances.

**Bomb Threat:**

A communicated threat, anonymous or otherwise, which suggests, or infers, whether true or false, that the safety of an aircraft in flight or on the ground, or any airport or civil aviation facility or any person may be in danger from an explosive or other item or device.

**Clear-Zone:** The area of the passenger cabin immediately in front of the flight crew compartment door, including galleys and lavatories.

**Lockdown:** The condition of the flight crew compartment door being closed and locked securely, with no traffic permitted either into or out of the flight crew compartment

**Unlawful seizure of Aircraft (hijacking of aircraft):**

Unlawfully and intentionally seizes or exercise control of an aircraft in-service by force or threat thereof or by coercion, or by any other form of intimidation, or by any technological means, and includes attempts thereof.

**Unruly/disruptive passengers:**

Persons who commit, on board aircraft in-flight an act of;

- a) assault, intimidation, menues or wilful recklessness which endangering good order or the safety of persons or property;
- b) assault, intimidation, menus or interfere with a crew member in performance of duties or which lessens the ability to perform them;
- c) communication of information known to be false thereby endangering the safety of the aircraft ; and
- d) disobedience to lawful commands or instructions for safe, orally or efficient operations

**12.1 Security instructions and guidance**

Operator's security program to be in compliance with IS 022, Para 2, 2.1 & 2.3 and National Civil Aviation Security Program of Sri Lanka.

**12.2 Authority of the Captain**

Pilot –in- command have the final authority given by Civil Aviation Act No 14 of 2010 to control the aircraft while in command and maintain discipline among all persons on board; take actions in an emergency, deviate from complying with any provisions of this Act or any regulations or rules made.



PIC should know the authority on his capacity that control access to the flight crew compartment, special categories of passengers on board and weapons on board. He has full authority to take necessary actions on unruly and disruptive passengers on board.

### 12.3 Security of crew baggage

Items carried by persons other than passengers, including crew baggage shall be Screened by:

- a) conventional x-ray equipment (dual/multi view)

or

- b) advanced screening equipment consisting Explosive Detection System (EDS) capable of automatic detection of explosives;
- c) Where screening equipment is not in working order, cabin baggage shall be searched by hand, supplemented by continuous random ETD check crew baggage continuously under surveillance or protected from interference between check-in and loading

Operator's procedure on screening of crew baggage.

### 12.4 Protection of company IDs

Operator's procedure on,

- a) Wearing of company ID
- b) Lose of ID
- c) Handover of ID when resignation
- d) CMC

### 12.5 Airport Access permits

Procedures and responsibility on Crew and the aircraft operator staff who has access permits to SRA and other areas.

### 12.6 Roles and responsibilities of AVSEC Unit of the company

Roles and responsibilities of each designation of Avsec section has to be mentioned here. Post holder for aviation security has to be approved by the CAASL and details has to be included here.

### 12.7 Flight crew compartment protection (IS 022, 2 & IS 033)

**Note 1:** All passenger-carrying aeroplanes of a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating capacity greater than 60 shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorized persons. This door shall be capable of being locked and unlocked from either pilot's station. (IS 033, 1)

**Note 2:** Means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behavior or potential threat. (IS 022, 2.1)

Operator's instructions to comply with following.

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(i) In all aeroplanes which are equipped with a flight crew compartment door, this door shall be capable of being locked, and means shall be provided by which cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin.

(ii) In all aeroplanes which are equipped with a flight crew compartment door in accordance with Note 1 above;

This door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorized persons.

#### **12.8 Security of Parked Aircraft**

Aircraft operators engaged in commercial air transport operations at any international or domestic airport in Sri Lanka are responsible for the security of their aircraft whilst at the airport. This responsibility includes searching and checking their aircraft, protecting their aircraft, controlling access to their aircraft and protecting aircraft operator documentation.

#### **12.9 Aircraft searches and checks procedures and checklist**

Aircraft operators shall be responsible for implementation of aircraft check and search at any international or domestic airport in Sri Lanka as mentioned in 8.3 of NCASP.

Must include-

1. Checklist of Aircraft Security Search
2. Checklist of Aircraft Security Check

#### **12.10 Communication procedure between crew**

The communication channels and modes between crew have to be described when the aircraft is in-flight in normal conditions and emergency situations.

#### **12.11 Diplomatic pouches and government couriers**

Company procedures on handling of diplomatic pouches have to be described here. Refer NCASP – 12.4 for more information.

#### **12.12 Special Categories of Passengers (Prisoners/Deportees, Inadmissible passengers, Persons with disabilities, unruly and disruptive passengers, etc...)**

Handling procedure when transporting potentially disruptive passengers such as deportees or persons in the custody of law enforcement personnel, before, during, and on termination of the flight, to ensure the safety on board their aircraft.

#### **12.13 Passengers exempted from screening**

Certain categories of persons are exempt from screening of their persons and their Baggage e.g such as State heads etc... some passengers are bringing arms/ weapons with them. PIC has to know every detail of those passengers and how to handle them.

#### **12.14 Handling of security restricted articles**

Operator's procedure on handling of security restricted articles.



No restricted articles can be carried onboard an aircraft without the authorization of appropriate authority. All the passengers shall be screened and remove such articles before embarkation.

#### **12.15 In-flight security officers**

When travel of armed personnel such as In-Flight Security Officers (IFSOs) on board the aircraft PIC should be informed in-advance.

#### **12.16 LAGs implementation, Procedures for on board duty free sales**

LAG implementation has to be followed by the operator and the crew. All LAGs should be carried in containers with a capacity of no more than 100 ml each, or its equivalent in other volumetric measurements.

#### **12.17 Domestic flight clearance, control and monitoring**

Clearance for the flights including Air defense clearance number has to be taken before flight.

#### **12.18 Procedures for Carriage of weapons**

Any person carrying weapons onboard in any aircraft within the territory of Sri Lanka or in any Sri Lanka registered aircraft wherever it may be, shall hold authorization issued by Director General of Civil Aviation & Chief Executive Officer of Civil Aviation Authority for carriage of weapons onboard aircraft.

Aircraft operators transporting individuals authorized to carry weapons shall ensure that:

- (i) proper written documentation authorizing the carriage of a weapon/s is presented;
- (ii) prior to boarding, armed individuals are thoroughly instructed on all rules and regulations on the carriage of weapons;
- (iii) no alcoholic beverages are served to armed individuals; and
- (iv) the pilot-in-command and all crew members are notified of the number of armed individuals on board the aircraft and their seat location.
- (v) If more than one armed individual/parties travel on-board an aircraft are informed each other.
- (vi) The weapon has to be unloaded.
- (vii) Either the weapons are stowed in passenger's hold baggage or in any other area that is inaccessible to any person while the aircraft is in flight.

#### **12.19 Security Training for the Crew**

Every operator shall be developed and maintain a security training programme in-line to the NCASTP and all crew members will be undergo annual security training.

#### **12.20 Procedures on handling bomb threat situation**

Operator's policy and procedures in relation to a bomb threat or warning, when the aircraft is on the ground or in-flight.



**12.21 Handling sabotage situation**

Operator's policy and procedures when aircraft is on a sabotage situation.

**12.22 Handling of hijack situation**

Operator's policy and procedures in relation to the aircraft is in a hijacking situation

**12.23 Incident Reporting Procedure**

The operator's procedure in reporting of special and unusual incidents to the appropriate authority, that occurring when the aircraft in flight.

**12.24 Domestic Commercial Operations**

Operator's procedure to comply with following Security requirements tabulated in Chapter 12 shall be applicable to International and Domestic flight operations equally.



## Chapter - 13 HANDLING, NOTIFYING AND REPORTING OCCURENCES

### 13.1 Procedures for the Handling, Notifying and Reporting Occurrences. (Ref IS 006)

This section must include:

- (a) Definitions of occurrences and of the relevant responsibilities of all persons involved;
- (b) Illustrations of forms used for reporting all types of occurrences (or copies of the forms themselves), instructions on how they are to be completed, the addresses to which they should be sent and the time allowed for this to be done;
- (c) In the event of an accident, descriptions of which company departments, Authorities and other organizations that have to be notified, how this will be done and in what sequence;
- (d) Procedures for verbal notification to air traffic service units of incidents involving ACAS RAs, bird hazards and hazardous conditions, including flight in volcanic ash;
- (e) Procedures for submitting written reports to the DGCA on air traffic incidents, ACAS RAs, bird strikes, dangerous goods incidents or accidents, and unlawful interference;

All Reporting procedures to ensure compliance with National regulations and directives issued by the DGCA.

These procedures must include internal safety related reporting procedures to be followed by crew members, designed to ensure that the Commander is informed immediately of any incident that has endangered, or may have endangered, safety during flight and that he is provided with all relevant information.

### 13.2 Flight recorder records (IS 015, 3.4.2.2)

Operators' procedure to ensure following.

An operator shall ensure, to the extent possible, in the event the aeroplane becomes involved in an accident or incident, the preservation of all related flight recorder records and, if necessary, the associated flight recorders, and their retention in safe custody pending their disposition as determined by the DGCA.

### 13.3 Flight recorder electronic documentation (IS 015, 3.4.4)

Operators' procedure to ensure following.

The documentation requirement concerning FDR and ADRS parameters provided by operators to accident investigation authorities should be in electronic format and take account of industry specifications. Ref – IS 015, 3.4.4

*Note. — Industry specification for documentation concerning flight recorder parameters may be found in the ARINC 647A, Flight Recorder Electronic Documentation, or equivalent document.*



## Chapter - 14 RULES OF THE AIR

### 14.1 Rules of the Air including.

- a) Visual and instrument flight rules;
- b) Territorial application of the Rules of the Air;
- c) Communication procedures including COM-failure procedures;
- d) Information and instructions relating to the interception of civil aeroplanes;
  - i. Procedures as prescribed in IS 026, for Pilot in Command of intercepted aircraft.
  - ii. Visual signals for use by intercepting and intercepted aircraft as contained in IS 026
- e) The circumstances in which a radio listening watch is to be maintained;
- f) Signals;
- g) Time system used in operation;
- h) ATC clearances, adherence to flight plan and position reports;
- i) Visual signals used to warn an un authorized aeroplane flying in or about to enter a restricted, prohibited or danger area;
- j) Procedures, as prescribed in IS 029, for Pilot in Command observing an accident;
- k) Procedures for pilots receiving a distress transmission;
- l) The ground/air visual codes for use by survivors, description and use of signal aids; and

## Chapter - 15 Distress and urgency signals. LEASING AGREEMENTS

### 15.1 Types of leasing agreements

- I. Dry Lease
- II. Wet Lease
- III. Damp Lease

Note: For more guidance on leasing agreements refer Implementing Standards 091.



## SECTION 7 OPERATIONS MANUAL - PART B

### 7.1 INSTRUCTIONS FOR COMPILING OPERATIONS MANUAL – PART B

- 7.1.1 The Operations manual (PART B) referred to in Section 5 shall contain at least the following and comply with the format given below.
- 7.1.2 Operations Manual (Part B) may be compiled in many volumes by the Operator. However all applicable requirements as given in this manual (SLCAP 4500 Section 7) for the Operator's operation must be covered.
- 7.1.3 Volumes produced by aircraft manufacturer with the approval of the regulatory Authority of the country of manufacture may be accepted as Operations Manual Part B.
- 7.1.4 If any manufacturers' manuals are accepted ensure that all requirements given in Section 7 are covered. The Operator will be required to compile information in a separate manual if manufactures documents do not cover the required information in Section 7.
- 7.1.5 If any manufacturers' manuals are accepted ensure that the Operator has a system to obtain amendments from the manufacturer.
- 7.1.6 The Operator shall ensure that Operations Manual (Part B) conform to the format below and is relevant to the area of operation.
- 7.1.7 For standardization the following numbering system must be retained in the manual and "Not applicable" should be annotated against a paragraph if it is not applicable for the proposed operation.
- 7.1.8 If a separate manual is made in respect of any subject paragraph state so instead of "not applicable".

### 7.2 CONTENTS OF THE OPERATIONS MANUAL -PART B

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## OPERATIONS MANUAL - Part B

### AIRCRAFT OPERATING INFORMATION

- **Record of Revisions**  
Use format of Record of Revision page from this manual (SLCAP 4500).
- **List of effective pages**  
Use format of List of effective pages from this manual (SLCAP 4500).
- **History of Revisions**  
Use format of History of revisions page from this manual (SLCAP 4500).
- **Table of contents**  
Use format of table of contents page from this manual (SLCAP 4500).
- **Foreword**  
Use format of Foreword page from this manual (SLCAP 4500).
- **Acronyms / Abbreviations**  
Use Acronyms / Abbreviations given in this manual (SLCAP 4500).
- **Definitions**  
Use Definitions given in this manual (SLCAP 4500).

Note: Refer to SLCAP 4500, Section 2 paragraph 2.2 for manual standards for the preparation of the Operations Manual

Aircraft operating information, taking account of the differences between types, and variants of types, under the following headings.



## Chapter - 1 GENERAL INFORMATION AND UNITS OF MEASUREMENT

1.1 Operator's procedure and the established system to provide aircraft operating information to its operating staff and flight crew, including mandatory revisions.

The operator's system shall include;

- (a) The organization
- (b) Method of obtaining updates and revisions
- (c) Method of distribution of updates and revisions

1.2 General information of the aeroplane (e.g. aeroplane dimensions)

1.3 Description of the units of measurement used for the operation of the aeroplane type concerned and conversion tables.



## Chapter - 2 LIMITATIONS

2.1 A description of the certification limitations and operating limitations including;

- (a) Passenger seating configuration for each aeroplane type including a pictorial presentation;
- (b) Types of operation that are approved (e.g. VFR/IFR, CAT II/III, R-NAV, RNP, ETOPs/EDTO, RVSM, flight in known icing conditions, etc.);
- (c) Crew composition;
- (d) Mass and centre of gravity;
- (e) Speed limitations;
- (f) Flight envelope;
- (g) Performance limitations for applicable configurations;
- (h) Runway slope;
- (i) Limitations on wet or contaminated runways;
- (j) Airframe contamination;
- (k) System limitations;
- (l) Power plant limitations;

2.2 The maximum crosswind and tailwind components for each aeroplane type operated and the reductions to be applied to these values having regard to gusts, low visibility, runway surface conditions, crew experience, use of autopilot, abnormal or emergency circumstances, or any other relevant operational factors.



## Chapter - 3 OPERATING PROCEDURES

### 3.1 Aircraft Operating Manual (IS 020, 1)

- (a) The Operator shall provide operations staff and flight crew with an Aircraft Operating Manual/AFM, for each aircraft type operated, containing the normal, abnormal and emergency procedures (SOP) relating to the operation of the aircraft in respect of each phase of flight. (Ref – IS 015, 1.4)
- (b) The manual shall include details of the aircraft systems, associated controls, indications and instructions for their use.
- (c) The manual shall include checklists and instructions on how to use them.
- (d) The manual shall include crew coordination and assignments
- (e) The design of the manual shall observe Human Factors principles. Ref – (DOC 9683)

### 3.2 The Aircraft Operating Manual shall contain following Normal, Abnormal and emergency procedures as a minimum.

#### (a) Normal procedures

- (i) The normal procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists and a statement covering the necessary coordination procedures between flight crew and flight /cabin crew.
- (ii) The following normal procedures and duties must be included:
  - a. Pre-flight;
  - b. Pre-departure;
  - c. Altimeter setting and checking;
  - d. Taxi, take-off and climb;
  - e. Noise abatement;
  - f. Cruise and descent;
  - g. Approach, landing preparation and briefing;
  - h. VFR approach;
  - i. Instrument approach;
  - j. Visual approach and circling;
  - k. Missed approach;
  - l. Normal landing;
  - m. Post landing; and
  - n. Operation on wet and contaminated runways.



(b) Abnormal and emergency procedures

- (i) The abnormal and emergency procedures and duties assigned to the crew, the appropriate check-lists, the system for use of the check-lists and a statement covering the necessary coordination procedures between flight crew and flight / cabin crew.
- (ii) The following abnormal and emergency procedures and duties must be included if applicable:
  - a. Crew incapacitation;
  - b. Fire and smoke drills;
  - c. Unpressurised and partially pressurized flight;
  - d. Exceeding structural limits such as overweight landing;
  - e. Exceeding cosmic radiation limits;
  - f. Lightning strikes;
  - g. Distress communications and alerting ATC to emergencies;
  - h. Engine failure;
  - i. System failures;
  - j. Guidance for diversion in case of serious technical failure;
  - k. Ground proximity warning;
  - l. TCAS warning;
  - m. Wind shear;
  - n. Emergency landing/ditching;
  - o. Volcanic ash encounter



## Chapter - 4 PERFORMANCE

4.1. Performance data must be provided in a form in which it can be used without difficulty.

4.2. Performance data.

Performance material which provides the necessary data for compliance with the performance requirements prescribed in Operations Manual Part A, and paragraph 2.6 & 2.11 of IS 014,

Data must be included to allow the determination of;

- (a) Take-off climb limits — mass, altitude, temperature;
- (b) Take-off field length (dry, wet, contaminated);
- (c) Net flight path data for obstacle clearance calculation or, where applicable, take-off flight path;
- (d) The gradient losses for banked climb outs;
- (e) En-route climb limits;
- (f) Approach climb limits;
- (g) Landing climb limits;
- (h) Landing field length (dry, wet, contaminated) including the effects of an in-flight failure of a system or device, if it affects the landing distance;
- (i) Brake energy limits;
- (j) Speeds applicable for the various flight stages (also considering wet or contaminated runways).

4.3. Operating instructions and information on aeroplane climb performance with all engines operating to enable the calculation of the climb gradient that can be achieved during the departure phase for the existing take off conditions and intended take off technique

4.4. Supplementary data covering flights in icing conditions. Any certificated performance related to an allowable configuration, or configuration deviation, such as anti-skid inoperative, must be included.

4.5. Additional performance data.

Additional performance data where applicable including;

- (a) All engine climb gradients;
- (b) Drift-down data;
- (c) Effect of de-icing/anti-icing fluids;
- (d) Flight with landing gear down;
- (e) For aeroplanes with three or more engines, one engine inoperative ferry flights; and
- (f) Flights conducted under the provisions of the CDL.

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## Chapter - 5 FLIGHT PLANNING (IS 13, 3.3)

- 5.1 Flight planning data for preflight and in flight planning with different thrust /power and speed settings
- 5.2 Where applicable, procedures for engine(s)-out operations, EDTO/ETOPS (particularly the one-engine inoperative cruise speed and maximum distance to an adequate aerodrome determined in accordance Operations Manual Part A, 10.5) and flights to isolated aerodromes must be included.
- 5.3 The method for calculating fuel needed for the various stages of flight, in accordance with Operations Manual Part A, 10.1.6.
- 5.4 Performance Data for EDTO/ETOPS Critical Fuel Reserve and Area of Operation including sufficient data to support the critical fuel reserve and area of operation calculation based on Approved Aeroplane Performance Data.

The following data is required:

- (a) Detailed engine(s) inoperative performance data including fuel flow for standard and non-standard atmospheric conditions and as a function of airspeed and power setting, where appropriate, covering:
  - (i) Drift down (includes net performance). See Operations Manual Part A, 9.8 where applicable;
  - (ii) Cruise altitude coverage including 10 000 feet;
  - (iii) Holding;
  - (iv) Altitude capability (includes net performance); and
  - (v) Missed approach.
- (b) Detailed all-engine-operating performance data, including nominal fuel flow data, for standard and nonstandard atmospheric conditions and as a function of airspeed and power setting, where appropriate, covering:
  - (i) Cruise (altitude coverage including 10,000 feet); and
  - (ii) Holding.
- (c) Details of any other conditions relevant to ETOPS operations which can cause significant deterioration of performance, such as ice accumulation on the unprotected surfaces of the aeroplane, ram air turbine (RAT) deployment, thrust-reverser deployment, etc.
- (d) The altitudes, airspeeds, thrust settings, and fuel flow used in establishing the EDTO/ETOPS area of operations for each airframe-engine combination. Corresponding terrain and obstruction clearances must be shown.



## Chapter - 6 MASS AND BALANCE (IS 085)

### 6.1 Instructions and data for the calculation of the mass and balance including;

- (a) Calculation system (e.g. index system);
- (b) Information and instructions for completion of mass and balance documentation used, including manual and computer generated types;
- (c) Limiting masses and center of gravity for the types, variants or individual aeroplanes used by the operator; and
- (d) Dry operating mass and corresponding center of gravity or index.



## Chapter - 7 LOADING (IS 046)

### 7.1 Instructions for aircraft loading and securing of load.



## Chapter - 8 CONFIGURATION DEVIATION LIST

8.1 The operator shall provide as applicable, a configuration deviation list (CDL) for the acceptance of the DGCA.

- (a) Taking account of the aeroplane types and variants operated
- (b) Include specific operations authorized (EDTO/ETOPS, All weather operations, RVSM, RNP etc ;)
- (c) Include procedures to be followed when an aeroplane is being dispatched under the terms of its CDL.

8.2 Operator's arrangement to maintain the CDL current, at all times.



## Chapter - 9 MINIMUM EQUIPMENT LIST (IS 015)

- 9.1 The operator shall include in the Operations Manual a minimum equipment list (MEL), for the approval of the DGCA, Sri Lanka which will enable the pilot-in-command to determine whether a flight may be commenced or continued from any intermediate stop should any instrument, equipment or systems become inoperative. Ref – IS 015, General, 1.3, SLCAP - 4215
- 9.2 The preparation of the MEL shall comply with instructions issued by Civil Aviation Authority, Sri Lanka.
- 9.3 The MEL shall be based on the Master Minimum Equipment List (MMEL) established for the aircraft type by the organization responsible for the type design in conjunction with the state of design.
- 9.4 There shall be a MEL for each type of aircraft operated, taking account of the area of operation and specific operations authorized.
- 9.5 The MEL must include the navigational equipment and take into account the required performance for the route, including any requirements relating to operations where performance based navigation is prescribed, RVSM, EDTO/ETOPS and All Weather Operations.



## Chapter - 10 SURVIVAL AND EMERGENCY EQUIPMENT INCLUDING OXYGEN

### 10.1 Checklist of emergency and safety equipment and instructions for its use

- (a) A list of the survival and emergency equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and use of survival and emergency equipment and its associated check list (s) must also be included.
- (b) Emergency locator transmitter (ELT) Ref IS 015, paragraph 17.

Operational procedures and training requirements in respect of ELT. Requirements of below note must be complied with.

*Note.*

*The judicious choice of numbers of ELTs, their type and placement on aircraft and associated floatable life support systems will ensure the greatest chance of ELT activation in the event of an accident for aircraft operating over water or land, including areas especially difficult for search and rescue. Placement of transmitter units is a vital factor in ensuring optimal crash and fire protection. The placement of the control and switching devices (activation monitors) of automatic fixed ELTs and their associated operational procedures will also take into consideration the need for rapid detection of inadvertent activation and convenient manual switching by crew members.*

### 10.2 Records of emergency and survival equipment carried (IS 020, 5)

Procedure to ensure following.

Operators shall at all times have available for immediate communication to rescue coordination centers, lists containing information on the emergency and survival equipment carried on board any of their aeroplanes engaged in international air navigation. The information shall include, as applicable, the number, color and type of life rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of the emergency portable radio equipment.

### 10.3 Oxygen (Ref IS 013, 4.9 and 4.6.)

The procedure for determining the amount of oxygen required and the quantity that is available. The flight profile, number of occupants and possible cabin decompression must be considered. The information provided must be in a form in which it can be used without difficulty.



## Chapter - 11 FLIGHT CREW EMERGENCY DUTIES (IS 018, 2)

### 11.1 Flight crew emergency duties

Operator's procedures to ensure following.

- (a) An operator shall, for each type of aeroplane, assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation.
- (b) Annual training in accomplishing these functions shall be contained in the operator's training program (to be included in Operations Manual - Part D) and shall include instruction in the use of all emergency and lifesaving equipment required to be carried, and drills in the emergency evacuation of the aeroplane.

11.2 Emergency evacuation procedures, including type specific procedures, crew coordination, assignment of crew's emergency positions and the emergency duties assigned to each flight / cabin crew member.

11.3 The normal, abnormal and emergency procedures to be used by the cabin crew, the checklists relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew.



## Chapter - 12 GROUND AIR VISUAL CODES (IS-029)

12.1 The ground air visual signal code, for use by survivors, as contained in



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## SECTION 8 OPERATIONS MANUAL - PART C

### 8.1 INSTRUCTIONS FOR COMPILING OPERATIONS MANUAL – PART C

- 8.1.1 The Operations manual (PART C) referred to in Section 5 shall contain at least the following and comply with the format given below.
- 8.1.2 Operations Manual (Part C) may be compiled in many volumes by the Operator. However all applicable requirements as given in this manual (SLCAP 4500, Section 8) for the Operator's operation must be covered.
- 8.1.3 The Operator shall ensure that Operations Manual (Part C) conform to the format below and is relevant to the area of operation.
- 8.1.4 For standardization the following numbering system must be retained in the manual and "Not applicable" should be annotated against a paragraph if it is not applicable for the proposed operation.
- 8.1.5 If a separate manual is made in respect of any subject paragraph state so instead of "not applicable".

### 8.2 CONTENTS OF THE OPERATIONS MANUAL -PART C

REFER TO NEXT PAGE



## OPERATIONS MANUAL – PART C

### AREAS, ROUTES AND AERODROMES

- **Record of Revisions**  
Use format of Record of Revision page from this manual (SLCAP 4500).
- **List of effective pages**  
Use format of List of effective pages from this manual (SLCAP 4500).
- **History of Revisions**  
Use format of History of revisions page from this manual (SLCAP 4500).
- **Table of contents**  
Use format of table of contents page from this manual (SLCAP 4500).
- **Foreword**  
Use format of Foreword page from this manual (SLCAP 4500).
- **Acronyms / Abbreviations**  
Use Acronyms / Abbreviations given in this manual (SLCAP 4500).
- **Definitions**  
Use Definitions given in this manual (SLCAP 4500).

Note: Refer to SLCAP 4500, Section 2 paragraph 2.2 for manual standards for the preparation of the Operations Manual

Aircraft operating information, taking account of the differences between types, and variants of types, under the following headings.

1.1 A route guide to ensure that the flight crew will have, for each flight, information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary for the proper conduct of flight operations.

1.2 Instructions and information to include;

- (a) Minimum flight level/altitude for each route to be flown;
- (b) Aerodrome Operating Minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes;
- (c) The increase of Aerodrome Operating Minima in case of degradation of approach or aerodrome facilities;
- (d) Instructions for determining aerodrome operating minima for instrument approaches using HUD and EVS.
- (e) Communication facilities and navigation aids;

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- (f) Runway data and aerodrome facilities;
- (g) Approach, missed approach and departure procedures including noise abatement procedures;
- (h) COM-failure procedures;
- (i) Search and rescue facilities in the area over which the aeroplane is to be flown;
- (j) A description of the aeronautical charts that must be carried on board in relation to the type of flight and the route to be flown, including the method to check their validity;
- (k) Availability of aeronautical information and MET services;
- (l) En-route COM/NAV procedures;
- (m) Aerodrome categorization for flight crew competence qualification;
- (n) Special aerodrome limitations (performance limitations and operating procedures).

1.3 The necessary information for compliance with all flight profiles required by regulations, including but not limited to, the determination of:

- (a) Take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-off distance;
- (b) Take-off climb limitations;
- (c) En-route climb limitations;
- (d) Approach climb limitations and landing climb limitations;
- (e) Landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance; and
- (f) Supplementary information, such as tire speed limitations.



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## SECTION 9 OPERATIONS MANUAL - PART D

### 9.1 INSTRUCTIONS FOR COMPILING OPERATIONS MANUAL – PART D

- 9.1.1 The Operations manual (PART D) referred to in Section 5 shall contain at least the following and comply with the format given below.
- 9.1.2 Operations Manual (Part D) may be compiled in many volumes by the Operator. However all applicable requirements as given in this manual (SLCAP 4500, Section 9) for the Operator's operation must be covered.
- 9.1.3 The Operator shall ensure that Operations Manual (Part D) conform to the format below and is relevant to the flight operations authorized.
- 9.1.4 For standardization the following numbering system must be retained in the manual and "Not applicable" should be annotated against a paragraph if it is not applicable for the proposed operation.
- 9.1.5 If a separate manual is made in respect of any subject paragraph state so instead of "not applicable".

### 9.2 CONTENTS OF THE OPERATIONS MANUAL -PART D

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## OPERATIONS MANUAL – PART D

### TRAINING

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- **List of effective pages**  
Use format of List of effective pages from this manual (SLCAP 4500).
- **History of Revisions**  
Use format of History of revisions page from this manual (SLCAP 4500).
- **Table of contents**  
Use format of table of contents page from this manual (SLCAP 4500).
- **Foreword**  
Use format of Foreword page from this manual (SLCAP 4500).
- **Acronyms / Abbreviations**  
Use Acronyms / Abbreviations given in this manual (SLCAP 4500).
- **Definitions**  
Use Definitions given in this manual (SLCAP 4500).

Note: Refer to SLCAP 4500, Section 2 paragraph 2.2 for manual standards for the preparation of the Operations Manual



## Chapter - 1 FLIGHT CREW TRAINING PROGRAMMES

### 1.1 Training Policy

Training Policy can be defined as any activity designed to help crew members to become more effective in their knowledge and flying skills; and the training process should be continuously monitored and developed.

1.2 Operator shall establish and maintain Ground and flight training programmes approved by the DGCA, which ensures that all flight crews are adequately trained to perform their assigned duties. Please refer paragraph 10 of IS 090 for the approval of training programmes.

- (a) Include ground and flight training facilities which may provide computer based training, flight training devices and flight simulators where applicable and DGCA approved instructors as in reference to IS 018, 3 & IS 090;
- (b) Include Crew Resource Management Training (GD 001):
- (c) Include Mode Awareness and Energy State management aspects of flight deck automation:
- (d) Include Flight Crew initial and recurrent Approach And Landing Accidents (ALA) and CFIT prevention training:
- (e) Include training on instrument approach procedures using continuous descent final approach techniques:
- (f) Consist of ground and flight training in the type(s) of aeroplane on which the flight crew serves;
- (g) Include proper flight crew coordination and training in all types of emergency and abnormal situations or procedures caused by engine, airframe or systems malfunctions, fire or other abnormalities;
- (h) Include upset prevention and recovery and, un-usual attitude training;
- (i) Include training in knowledge and skills related to visual and instrument flight procedures for the intended area of operation, charting, and human performance including threat and error management and in the transport of dangerous goods
- (j) Ensure that all flight crews know the functions for which they are responsible and the relation of these functions to the functions of other crew members, particularly in regard to abnormal or emergency procedures. The above training should be given on a recurrent basis as determined by the DGCA.
- (k) Be given on a recurrent basis as determined by the DGCA and shall include an assessment of competence.
- (l) Include initial training as required in SLCAP 4500, OM Part B 11.1 (b).



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*Note 1. In-flight simulation of emergency or abnormal situations when passengers or cargo are being carried is prohibited (Refer to SLCAP 4500, OM Part A 2.3 (L)).*

*Note 2. Flight training may, to the extent deemed appropriate by the DGCA, be given in flight simulation training devices approved by the state for that purpose.*

*Note 3. The scope of the recurrent training required by SLCAP 4500, section 9, part D, 1.3 (i) and part B, chapter 11, 11.1 (b), may be varied and need not be as extensive as the initial training given in a particular type of aeroplane.*

*Note 4. The use of correspondence courses and written examinations as well as other means may to the extent deemed feasible by the DGCA, be utilized in meeting the requirements for periodic ground training.*

*Note 5. For more information on dangerous goods operational requirements, refer to IS 009*

*Note 6. Guidance material to design training programs to develop knowledge and skills in human performance can be found in the Human Factors Training Manual (ICAO Doc 9683).*

*Note 7. Information for pilots and flight operations personnel on flight procedure parameters and operational procedures is contained in PANS-OPS (Doc 8168), Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS (Doc 8168), Volume II. Obstacle clearance criteria and procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons.*

*Note 8. Guidance material to design flight crew training programs can be found in the Manual of Evidence-based training (Doc 9995).*

*Note 9. Guidance material on the different means used to assess competence can be found in the Attachment to Chapter 2 of the Procedures for Air Navigation Services – Training (PANS-TRG, Doc 9868).*

*Note 10. Procedures for upset prevention and recovery training in a flight simulation training device are contained in the procedures for Air Navigation services – Training (PANS-TRG, DOC 9868).*

*Note 11. Guidance on upset prevention and recovery training in a flight simulation training device is contained in Manual on Aeroplane Upset Prevention and recovery training (DOC 10011).*

### 1.3 Required training programs

Following training programs are required (as applicable). When developing the training programmes and syllabi, the operator should take into account the relevant data provided by the manufacturer, eg. Operational suitability data, specific training data etc.

#### (a) Initial Training

The operator conversion (Type Training) training as per the manufacturer's recommendations, should include, in the following order:

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- I. ground training and checking, including aircraft systems, and normal, abnormal and emergency procedures;
- II. emergency and safety equipment training and checking, (completed before any flight training in an aircraft commences);
- III. flight training and checking (aircraft and/or FSTD); and
- IV. line flying under supervision and line check.

(b) Transition (conversion)

1. In the case of aero plane or helicopter operations, the flight crew member shall complete the operator conversion training course before commencing unsupervised line flying:
  - i. when changing to an aircraft for which a new type or class rating is required;
  - ii. when joining an operator.
2. The operator conversion training course shall include training on the equipment installed on the aircraft as relevant to flight crew members' roles.

(c) Re qualification

Regaining Competency Training - Recency not maintained for pilots, who have lost competency on a type of aeroplane within 90 days, due to conversion training followed by MFF consolidation, break in active flight duties or MFF crew member failing to maintain aircraft recency on a type of aircraft, shall complete one line check of two sectors.

1. For pilots who have lost competency for a period between 90 and 180 days
  - i. A briefing on changes that have occurred to the aeroplane or its operation since the pilot's last flight.
  - ii. A line training of three to six sectors during which the candidate will complete all take-offs and landings, followed by a check of two sectors or as per the manufacturers recommendations.
2. For pilots who have not maintained their recency qualification for a period between 181 and 365 days
  - i. A briefing on changes that have occurred to the aeroplane or its operation since the pilot's last flight
  - ii. three sessions of simulator training, followed by a check; and SIM base training with 6 take off and landings or as per the manufacturers recommendations (both day and night).
  - iii. A line training of at least four sectors, (minimum three sectors as pilot flying) followed by a check of two sectors or as per the manufacturers recommendations.



3. For pilots who have not flown the respective aeroplane for the past 12 months, but flown within the last 24 months shall follow four sessions of simulator training, followed by a check and SIM base training with 6 take off and landings or as per the manufacturers recommendations (both day and night).
  - i. A line training of at least eight sectors (minimum six sectors as pilot flying) followed by a check of two sector or as per the manufacturers recommendation. (both, day and night)
4. Where a pilot has not flown for a period greater than 24 months a complete initial type training programme shall be carried out or as per the manufacturers recommendations.

(d) Up grade

1. For aeroplane and helicopter operations, the upgrading to command shall include at least the following elements:
  - i. training in an FSTD, which includes line oriented flight training (LOFT) and/or flight training;
  - ii. the operator proficiency check, operating as Pilot In Command ;
  - iii. line training as Pilot in command and command responsibility training under supervision for a minimum of 14 sectors followed by a check of two sectors in the case of areoplanes, and 10 sectors in a helicopter followed by a check flight.
  - iv. completion of a line check as Pilot in Command and demonstration of adequate knowledge of the route or area to be flown and of the aerodromes, including alternate aerodromes, facilities and procedures to be used; and
  - v. Crew resource management training.

(e) Recency of experience

The operator shall not assign a Pilot-in-Command or a co-pilot to operate at the flight controls of a type or variant of a type of aeroplane during take-off and landing unless that pilot has operated the flight controls during at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.

(f) Differences and Familiarization

1. Differences training requires additional knowledge and training on the aircraft or an appropriate training device. It should be carried out:
  - i. when introducing a significant change of equipment and/or procedures on types or variants currently operated; and



- ii. in the case of aeroplanes, when operating another variant of an aeroplane of the same type or another type of the same class currently operated; or
  - iii. in the case of helicopters, when operating a variant of a helicopter currently operated.
2. Familiarization training requires only the acquisition of additional knowledge. It should be carried out when:
- i. operating another helicopter or aeroplane of the same type; or
  - ii. When introducing a significant change of equipment and/or procedures on types or variants currently operated.

(g) Safety management

(h) Initial training as required in SLCAP 4500, OM Part B 11.1 (b).

(i) Other specialized training (refer Chapter 7 of this section for details)

#### 1.4 Recurrent training

- a) All Flight crew, ground / flight training programs as required in Section 9, paragraph 1.2 above shall be conducted on a recurrent basis, as determined by the Civil Aviation Authority, Sri Lanka.
- b) The scope of the training required by Section 9, paragraph 1.2 (i) above and OM / Part B Chapter 11, 11.1 (b) may be varied and need not be as extensive as the initial training given in a particular type of aeroplane for recurrent training requirement.
- c) The requirement for recurrent flight training in a particular type of aeroplane shall be considered fulfilled by;
  - i. The use, to the extent deemed feasible by Civil Aviation Authority, Sri Lanka, of flight simulation training devices approved by Authority for that purpose; or
  - ii. The completion within the appropriate period of the Pilot Proficiency Check (PPC) required by SLCAP 4500, OM Part A, 6.4 (a) in that type of aeroplane.

#### 1.5 Use of flight simulation training devices

- (a) Flight training may, to the extent deemed appropriate by the DGCA, be given in flight simulation training devices validated by the DGCA for that purpose.
- (b) Data of all validated flight training devices shall be documented and retained at Civil Aviation Authority, Sri Lanka.
- (c) Use of External Simulators  
In the event an unapproved External Simulator is required to be used for flight training, a suitably qualified Simulator Instructor/DCP shall evaluate the simulator for its suitability to conduct training.

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Head/Director Flight Operations shall request approval for the use of the simulator from the DGCA. Only those simulators approved by the CAASL, shall be used.

Designated Check Pilots (DCPs) will continually evaluate the training devices during training/ check programmes to ensure compliance with required qualification & performance standards.

#### 1.6 Ground training facilities

- (a) All ground training facilities to be used by flight crew to complete a training program as required by this manual shall have the approval of the DGCA preceded by a technical evaluation.
- (b) Data of all approved ground training facilities shall be documented and retained at Civil Aviation Authority, Sri Lanka.

#### 1.7 Use of correspondence courses

The use of correspondence courses and written examinations as well as other means may, to the extent deemed feasible by the DGCA, be utilized in meeting the requirements for periodic ground training.

#### 1.8 Assessment of competence

All training programs (initial / recurrent) shall include an assessment of competence.

#### 1.9 Remedial Training

The procedures for remedial training and subsequence examinations of flight crew, unable to achieve or maintain required standards, shall be in accordance to the air operator training requirements.

#### 1.10 Instructors (IS 090)

##### (a) Ground Instructors

- (i) All ground instructors for Flight crew training programs shall have the approval of the DGCA.
- (ii) Data of all approved ground instructors shall be documented and retained at Civil Aviation Authority, Sri Lanka.

##### (b) Flight Instructors

- (i) All Flight Instructors for Flight crew training programs shall have the approval of DGCA.
- (ii) Data of all approved Flight Instructors shall be documented and retained at Civil Aviation Authority, Sri Lanka.



#### 1.11 Regulatory approval

All flight crew training programs (Ground / Flight) including all training material shall have the approval of the DGCA.



## Chapter - 2 CABIN CREW

2.1 An operator shall establish and maintain a training program as specified in SLCAP 4305, to be completed by all persons before being assigned as a cabin crew member.

2.2 These training programs shall ensure that each person is:

- (a) Competent to execute those safety duties and functions which the cabin crew member is assigned to perform in the event of an emergency or in a situation requiring emergency evacuation;
- (b) Drilled and capable in the use of emergency and lifesaving equipment required to be carried, such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment, first-aid and universal precaution kits, and automated external defibrillators;
- (c) When serving on aeroplanes operated above 3000 m (10000 ft), knowledgeable as regards the effect of lack of oxygen and, in the case of pressurized aeroplanes, as regards physiological phenomena accompanying a loss of pressurization;
- (d) Aware of other crew members' assignments and functions in the event of an emergency so far as is necessary for the fulfillment of the cabin crew member's own duties;
- (e) Aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin;

Note: Training of cabin crew members in the transport of dangerous goods are to be in compliance with IS 009.

- (f) Knowledgeable about human performance as related to passenger cabin safety duties including flight crew cabin crew coordination.

2.3 As a minimum following theoretical and practical training shall be included in the cabin crew training program.

- (a) Basic indoctrination in the different functions, duties and responsibilities of cabin crew members
- (b) Introduction to applicable aircraft systems and limitations
- (c) Aircraft emergency evacuation, life-safety equipment and related information to passengers
- (d) Cabin crew members assignment, coordination and two-way communication
- (e) Crew Resource Management
- (f) Knowledge and skills related to the transport of dangerous goods
- (g) Security procedures
- (h) Safety Management Systems

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2.4 Cabin crew members shall complete a recurrent training program annually.

2.5 All Initial / recurrent training programmes shall have an assessment of competence.

2.6 Ground training facilities

(a) All ground training facilities to be used by cabin crew to complete a training program as required by this manual shall have the approval of the DGCA, preceded by a technical evaluation.

(b) Data of all approved ground training facilities shall be documented and retained at Civil Aviation Authority, Sri Lanka.

2.7 Instructors (IS 021, IS 090, SLCAP 4305),

(a) All Instructors conducting safety training for Cabin crew shall have the approval of DGCA preceded by a technical evaluation.

(b) The minimum qualification requirement to be assigned as a safety Instructor for cabin crew shall be

(i) Minimum of five years' experience as a Flight Crewmember or

(ii) Minimum of five years' experience as a Cabin Crewmember out of which 01 years' experience as a supervisor and

(iii) Followed a course on "Train the Trainer" program or any other program to be certified as a trainer in order to be able to develop and deliver training programs and

(iv) Any other requirement as stipulated by DGCA from time to time.

(c) Data of all approved Instructors shall be documented and retained at CAASL.

2.8 Regulatory approval

All cabin crew training programs (Ground / Flight) including all training material shall have the approval of the DGCA.



## Chapter - 3 FLIGHT OPERATIONS OFFICER / FLIGHT DISPATCHER

- 3.1 A Flight Operations officer / Flight Dispatcher shall satisfactorily complete an operator-specific training course that addresses all the specific components of its approved method of control and supervision of flight operations prior being authorized to commence flight dispatch / flight following duties (IS 19, 3 (A) )
- 3.2 The training required as above shall be conducted on a recurrent basis, and such records shall be maintain as long as the FOO is in the employment of the company. (IS-090)
- 3.3 The following training as a minimum is required.
- (a) Civil Air Law and regulations
  - (b) Aviation Indoctrination / Instruction
  - (c) The contents and use of the Operations Manual
  - (d) Aircraft performance
  - (e) The radio equipment in the aeroplanes used
  - (f) Navigation (general)
  - (g) The navigation equipment in the aeroplanes used. The peculiarities and limitations of each navigation system which is used by the operation;
  - (h) Meteorology (general)
  - (i) The seasonal meteorological conditions and the sources of meteorological information applicable to the area of operation
  - (j) The effects of meteorological conditions on radio reception in the aeroplanes used;
  - (k) Mass and balance control
  - (l) The aeroplane loading instructions;
  - (m) Flight planning and monitoring
  - (n) Use of MEL / CDL
  - (o) Rules of the Air, communication and air traffic management
  - (p) Transport of Dangerous goods by air
  - (q) Security procedures (refer to Chapter 6 of Operations Manual Part D)
  - (r) Emergency response plan ( refer to Section 6, OM Part A, Chapter 10, 1.21)
  - (s) Flight observation
  - (t) Knowledge and skills related to human performance relevant to dispatch duties;



3.4 In addition to the training required as in Paragraph 3.3, the Flight Operations Officer / Flight Dispatcher shall demonstrate to the operator the ability to perform the duties as specified below. (IS-013, 6)

- (a) Assist the pilot-in-command in flight preparation and provide the relevant information (IS 013, 6.1 (A) )
- (b) Assist the pilot-in-command in preparing the Operational and ATS flight plans, sign when applicable and file the ATS flight plan with the appropriate ATS unit (IS 013, 6.1 (B) )
- (c) Furnish the pilot-in-command while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight. (IS-013,6.1 (C) )
- (d) Notify the appropriate ATS unit when the position of the aeroplane cannot be determined by an aircraft tracking capability, and attempts to establish communication are unsuccessful.
- (e) In the event of an emergency;
  - (i) To initiate such procedures as outlined in the operations manual while avoiding taking any action that would conflict with ATC procedures (IS-013,6.2 (A) )
  - (ii) Convey safety-related information to the pilot-in-command that may be necessary for the safe conduct of the flight, including information related to any amendments to the flight plan that become necessary in the course of the flight. (IS 013, 6.2 (B) )

Note – It is equally important that the pilot-in-command also convey similar information to the flight operations officer/ flight dispatcher during the course of the flight, particularly in the context of emergency situations.

3.5 All Initial / recurrent training programs shall have an assessment of competence.

### 3.6 Ground Training Facilities

- (a) All ground training facilities to be used by flight operations officers to complete a training program as required by this manual shall have the approval of DGCA preceded by a technical evaluation.
- (b) Data of all approved ground training facilities shall be documented and retained at Civil Aviation Authority, Sri Lanka.

### 3.7 Ground Instructors

- (a) All ground instructors for Flight Operations Officer training programs shall have the approval of DGCA, Sri Lanka preceded by a technical evaluation.
- (b) The minimum qualification requirement to be assigned as a ground Instructor shall be

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- (i) A Pilot in Command of the Operator
- (ii) A first Officer with two years' experience with the Operator
- (iii) A senior Flight Operations Officer with five years' experience with the Operator
- (c) Data of all approved ground instructors shall be documented and retained at Civil Aviation Authority, Sri Lanka.

3.8 All Flight Operations Officer/ Dispatcher training programs including all training material require a technical evaluation and the program may be accepted or approval granted.

3.9 All Flight Operations Officer/Dispatcher checking shall be appropriate to night and /or IMC operations by single-engine turbine-powered aeroplanes, covering normal, abnormal and emergency procedures (IS 14, Appendix 2, 7.3).



## Chapter - 4 Training For Instructors And Examiners (IS 090)

4.1 Appropriate Initial training programs for following Instructors and Examiners to ensure that they attain the required knowledge, skills and qualifications

(a) Ground Instructors

(i) Instructors for flight crew

(ii) Instructors for cabin crew

(iii) Instructors for flight operations officers

(iv) Instructors for Ground staff

(b) Flight Instructors

(c) Operator personnel delegated with Checking functions

4.2 Appropriate Recurrent training programs for all Instructors and Examiners (as specified in paragraph 4.1 above) to ensure that they maintain the required knowledge, skills and qualifications

4.3 All Initial / recurrent training programs shall have an assessment of competence.

4.4 All training programs including all training material shall have the approval of the DGCA.

4.5 All ground training facilities and Flight simulation training devices used for training modules in this chapter shall have the approval of the DGCA

4.6 All ground instructors and Flight instructors (conducting training modules in this chapter) shall have the approval of the DGCA.



## Chapter - 5 Training On “The Safe Transport Of Dangerous Goods By Air” (IS-009)

### 5.1 Operators who are authorized to carry Dangerous goods by air

For appropriate employees of the Operator (flight dispatchers / ground handling staff / security staff etc.), including all crew members:

- (a) Appropriate training as prescribed in SLCAP 4400.
- (b) All Initial / recurrent training programs shall have an assessment of competence.
- (c) All initial and recurrent training programs including all training material shall have the approval of the DGCA.
- (d) All ground training facilities used for training modules in this chapter shall have the approval of the DGCA.
- (e) All ground instructors used for training modules in this chapter shall have the approval of the DGCA.

### 5.2 Operators who are not authorized to carry Dangerous goods by air (IS 009)

For appropriate employees of the Operator (flight dispatchers / ground handling staff / security staff etc;), including all crew members to enable them to recognize and refuse transportation of Dangerous goods by air.

- (a) Appropriate training as prescribed in SLCAP 4400.
- (b) All Initial / recurrent training programs shall have an assessment of competence.
- (c) All initial and recurrent training programs including all training material shall have the approval of the DGCA.
- (d) All ground training facilities used for training modules in this chapter shall have the approval of the DGCA.
- (e) All ground instructors used for training modules in this chapter shall have the approval of the DGCA



## Chapter - 6 Training On Security

**Note:**

*In the context of this Chapter, the word “security” is used in the sense of prevention of illicit acts against civil aviation.*

6.1 The Operator shall establish and maintain an approved security training program which ensures flight and cabin crew members act in the most appropriate manner to minimize the consequences of acts of unlawful interference.

As a minimum, above program shall include the following elements:

- (a) Determination of the seriousness of any occurrence;
- (b) Crew communication and coordination;
- (c) Appropriate self-defense responses;
- (d) Use of non-lethal protective devices assigned to crew members whose use is authorized by CAASL.
- (e) Understanding of behavior of terrorists so as to facilitate the ability of crew members to cope with hijacker behavior and passenger responses;
- (f) Live situational training exercises regarding various threat conditions;
- (g) Flight deck procedures to protect the aeroplane;
- (h) Aeroplane search procedures and guidance on least-risk bomb locations where practicable.
- (i) Aircraft search procedure check list
- (j) Security of the flight crew compartment
- (k) Post flight concerns for the crew

The training program shall be in compliance with National civil aviation security program of Sri Lanka and any instructions issued by the DGCA.

6.2 Operator shall establish and maintain security training programs for appropriate employees of the Operator (flight dispatchers / ground handling staff / security staff etc.).

The training program shall be designed to acquaint appropriate employees with preventive measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aeroplane so that they contribute to the prevention of acts of sabotage or other forms of unlawful interference.

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The training program shall be in compliance with National civil aviation security program of Sri Lanka and any instructions issued by the DGCA.

6.3 Training as required in paragraph 6.1 and 6.2 above shall be conducted on recurrent basis.

6.4 All Initial / recurrent training programs shall have an assessment of competence.

6.5 All Initial / recurrent training programs including all training material shall have the approval of the DGCA.

6.6 All ground training facilities used for training modules in this chapter shall have the approval of the DGCA.

6.7 All ground instructors used for training modules in this chapter shall have the approval of the DGCA.



## Chapter - 7 Specialized Training Requirements

7.1 Operator's training / recurrent training programs for following subjects as applicable;

(a) Company Indoctrination

To include

(i) Study of Operations Manual

(ii) Structure of Civil Aviation Authority

(iii) Rules and regulations applicable to the Air Operator

(b) CRM

(c) SMS

(d) R-NAV/RNP/PBN/MNPS

(e) RVSM

(f) RCP

(g) Flight in icing conditions

(h) All Weather Operations (Low visibility takeoff , Category II, Category III operations)

(i) EDTO/ETOPS

(j) GPWS / EGPWS

(k) ACAS / TCAS

(l) MEL / MMEL

(m) Weather radar

(n) Transponders

(o) Forward looking wind shear warning system

(p) Loss of pressurization and use of oxygen

(q) Incapacitation of crew members

(r) Flight in adverse and potentially hazardous atmospheric conditions

(s) Wake turbulence

(t) Flight in volcanic ash

(u) HUD

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(v) EVS

(w) ELT

(x) Any other Training programs necessary to impart knowledge to Operator's flight crew to conduct duties in compliance with the Operations Manual.

7.2 All Initial / recurrent training programs shall have an assessment of competence.

7.3 All Initial / recurrent training programs including all training material shall have the approval of the DGCA.

7.4 All ground training facilities, flight simulation training devices used for training modules in this chapter shall have the approval of the DGCA.

7.5 All ground / flight instructors used for training modules in this chapter shall have the approval of the DGCA.



## Chapter - 8 Training Programs For Operator's Ground Handling Staff

- 8.1 Training /recurrent training programs necessary to impart knowledge to Operator's ground handling staff to conduct duties in respect of the requirements in Operations Manual SLCAP 4500.
- 8.2 All Initial / recurrent training programs shall have an assessment of competence.
- 8.3 All ground instructors used for training modules in this chapter shall have the approval of the DGCA.
- 8.4 All Initial / recurrent training programs including all training material shall have the approval of the DGCA.



## Chapter - 9 Procedures

### 9.1 Procedures for training and checking.

AS per the DGCA approved operator's training and checking procedure.

### 9.2 Procedures to be applied in the event that personnel do not achieve or maintain the required standards.

AS per the DGCA approved operator's procedures.

### 9.3 Use of separate training organizations

#### (a) Procedures for out sourcing Operators training to another organization.

AS per the DGCA approved operators out sourcing procedure.

#### (b) The organization that is used for operators training shall comply with the training programs approved by the DGCA and comply with the operator's flight safety documents system.

#### (c) The organization that is used for operators training shall comply with the training programmes approved by the DGCA and comply with the operator's flight safety documents system.

### 9.4 Conduct of Examinations and manoeuvre tolerances

AS per the DGCA approved operator's training and examination standards.



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## SECTION 10

### APPENDIX 1 - QUALIFICATIONS AND LEVEL OF EXPERIENCE NOMINATED POST HOLDERS

#### 1 NOMINATION OF POST HOLDERS

Nominated post holders must satisfy the DGCA, that they possess the appropriate experience and licensing requirements (if applicable) which are listed below.

In particular cases (as an exception) the DGCA, may accept a nomination which does not meet requirements in full. In such a circumstance the nominee should be able to demonstrate his experience /qualifications which the Authority will accept as been comparable. Such acceptance will depend upon the ability of nominee to perform effectively the functions associated with the post and the scale of operation.

The nominated post holders should have practical experience and expertise in the application of aviation safety standards and safe operating practices.

To enable the Civil Aviation Authority, Sri Lanka to clearly identify the persons responsible for different aspects of the operation, the applicant must nominate and seek approval for those personnel selected for following positions. The nomination shall be accompanied by a complete and accurate resume of the person nominated.

Any subsequent change in approved Nominated post holders should be effected only with the approval of the DGCA.

##### 1.1 Accountable Manager (General Manager / Chief Executive Officer)

Responsible for the overall functioning of the operation, who has corporate authority to ensure that all operations and maintenance activities can be financed and carried out to the standard required by the DGCA.

##### 1.2 Director Flight Operations

Responsible for the conduct and standard of Flight Operations

##### 1.3 Director Engineering and Maintenance

Responsible for the conduct and standard of Engineering and Maintenance

##### 1.4 Director Training

Responsible for the conduct and standards for all training as required in Operations Manual Part D, for persons involved with aircraft operations

##### 1.5 Director Ground Operations

Responsible for the conduct and standard of Ground Operations.

##### 1.6 Director Airline Security

Responsible for the standard of Airline Security

##### 1.7 Director In Flight Services (Cabin Safety)

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Responsible for Cabin Crew (Cabin Safety functions). This post holder shall function under the authority of the Director Flight Operations.

### 1.8 Director Quality

Responsible for the airline Quality System

### 1.9 Director Safety Management (SMS)

Responsible for the airline Safety Management System

### 1.10 Chief Pilots for each fleet

Responsible for the safe operation of an aircraft fleet

Some of the above positions may be combined, depending on the size and complexity of the Operation, if the management structure is acceptable to the DGCA.

It is not obligatory to use the titles above; however, the offices responsible for the duties listed in paragraph above must be clearly identified.

## 2 DESIRABLE QUALIFICATIONS OF NOMINATED POST HOLDERS

### 2.1 Accountable Manager (General Manager / Chief executive Officer)

To be agreed with the DGCA.

### 2.2 Director Flight Operations

The nominee shall have at least the following or comparable qualifications.

- (a) 2000 hours flight time in operations identical or substantially similar to those proposed
- (b) 1000 hours in command of aircraft of the same type or a type substantially similar to the major type of aircraft proposed to be operated
- (c) Sri Lanka License, rating(s) appropriate to the proposed category of operation
- (d) Before the commencement of revenue services, hold a P1 endorsement on the major type of aircraft proposed to be operated. Should the fleet change in the future, the head of line operations must maintain a first class endorsement on at least one major type in current operation. (Note: it is not necessary that the head of line operations actually operates the company's aircraft in revenue service, although the person appointed may choose to do. The requirement is that the head of line operations be personally experienced in the manner in which the company requires its major type of aircraft to be operated)
- (e) The candidate's performance within the past 5 years, should be such that there is no doubt as to his character, integrity or judgment in relation to Flight Operations. He should also have a history of maintenance of and compliance with regulatory requirements.

### 2.3 Director Engineering And Maintenance

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- (a) The Head of Maintenance / Engineering or Director Maintenance (as applicable), is responsible to the DGCA for ensuring that the terms and conditions stipulated in the MCM approved by the DGCA are complied with. This will guarantee that responsibility for taking corrective action for any deficiencies that will be identified by the CAA is vested at the highest level in the organization management structure, thus ensuring that the executive authority is in place for safe practices.
- (b) The holder of this position should be approved by the DGCA and it must be filled with an officer who satisfies the following requirements:
  - (i) Has a minimum of 10 years' experience in the aviation field acceptable to the DGCA of which five years should be at a supervisory level.
  - (ii) Pass the Air Legislation Examination for AMEs and has proven knowledge in airworthiness regulatory systems in force and knowledge to apply those requirements in managing civil aviation activities.

### 2.4 Director Training

- (a) 1000 hours flight time in operations identical or substantially similar to those proposed
- (b) 1000 hours in command of aircraft of the same type or substantially similar to those proposed to be operated.
- (c) 500 hours as an unrestricted Check Pilot on the same type of aircraft or an aircraft substantially
- (d) Hold a license and rating(s) appropriate to the proposed operations
- (e) Prior to the commencement of revenue services, hold unrestricted approval as a Check Pilot on the major type of aircraft to be operated. Should the fleet change in the future, maintain an unrestricted approval as a Check Pilot on at least one major type in current operations and
- (f) The candidate's performance within the past 5 years should be such that there is no doubt as to his character, integrity or judgment in relation to flight operations and maintenance of regulatory requirements.

### 2.5 Director Ground Operations

To be agreed with the DGCA.

### 2.6 Director Airline Security

Director – Aviation Security Unit (Av Sec) shall have one of the following qualifications;

- (a) Be an ex- military officer in the rank of Captain in the Sri Lanka Army or equivalent rank in the Sri Lanka Navy or Air Force; or
- (b) In the rank of assistant Superintendent in the Sri Lanka Police with a minimum of five (05) years' experience in an international aviation security environment in a senior executive capacity ;or

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- (c) A minimum of three (03) years' experience in Av Sec matters in the National Civil Aviation regularity body in the capacity of a senior executive.

#### 2.7 Director In Flight Services (Cabin Safety)

- (a) Two years' experience in a reputed airline as a manager in In-flight services section; or
- (b) Five years' experience as an instructor handling cabin crew in an airline; or
- (c) Person acceptable to the Authority with knowledge in related regulations pertaining to aviation.

#### 2.8 Director Quality

- (a) The Manager Quality Assurance is responsible to CEO to manage the Quality standards of the organization, administer and monitor the standards necessary to ensure full compliance with the terms of approval. Vest all requirements pertaining to the airworthiness of aircraft, its equipment and supporting facility.
- (b) The position should be filled with a person holding the following qualifications and he/she shall be acceptable to the DGCA.
- (c) Has a minimum of 7 years of aviation maintenance experience acceptable to the DGCA of which 3 years should be at a supervisory level in civil aircraft maintenance discipline.
  - (I) Hold or has held an AME license for a period more than three years and
  - (II) Has had at least three years of diversified maintenance experience on large aircraft with an Air Carrier or Approved Maintenance Organization.
  - (III) Holder of at least type Approvals to certify the aircraft operated by the prospective air operator.
  - (IV) Awarded with a course certificate to cover Airworthiness Management course for a period not less than 3 weeks and is acceptable to the DGCA.
  - (V) Should have qualified Quality Assurance Inspectors working under him, who holds necessary type approvals to carryout quality functions on all types of aircraft operating under the AOC.

#### 2.9 Director Safety Management (SMS)

To be agreed with the DGCA.

#### 2.10 Chief Pilots for each fleet

To be agreed with the DGCA.



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## APPENDIX 2 - DOCUMENT STORAGE PERIODS

### 1 STORAGE OF DOCUMENTS

An Operator shall ensure that the following information / documents are stored in a lockable storage facility for the periods shown below.

The information / documents shall be accessible to the Authority whenever requested.

### 2 INFORMATION USED FOR THE PREPERATION AND EXECUTION OF A FLIGHT

1. Operational Flight Plan	One Year
2. Aeroplane Technical Log	As per Airworthiness requirements
3. Route Specific NOTAMS / AIS Briefings	One Year
4. Mass And Balance Documentation	One Year
5. Passenger Manifest / Cargo Manifest	One Year
6. General Declaration	One Year
7. Meteorological Information Given To Crew	One Year
8. Fuel And Oil Records	One Year
9. Notification Of Special Loads Including Written Information To The Commander About Dangerous Goods	One Year

### 3 REPORTS

1. Journey Log	One Year
2. Reports recording detail of any occurrence or any event which the Commander deemed necessary to report / record	One Year
3. Report of exceeding Duty and / or Reducing Rest Periods	One Year



#### 4 FLIGHT CREW RECORDS

1. Flight, Duty And Rest Time	As long as the flight crew is in employment as a flight crew with the Operator
2. License	
3. All Initial Training Records / Checking	
4. All Recurrent Training Records / Checking	
5. Recent Experience	
6. Route And Aerodrome Competence / Checking	
7. Training and Checking Records for Specific Operations as required by Operations Manual (eg; EDTO/ETOPS, Low visibility, PBN etc;)	
8. Dangerous Goods Initial And Recurrent Training / Checking	

#### 5 CABIN CREW RECORDS

1. Flight ,Duty And Rest Time	As long as the crew member is in employment as a Cabin crew member with the Operator
2. Initial Training ,Conversion Training And Differences Training (Including Checking)	
3. Recurrent Training / Checking	
4. Refresher Training / Checking	
5. Dangerous Goods Initial / Recurrent Training, Checking As Appropriate	

**6 RECORDS OF OTHER OPERATIONS PERSONAL**

Training / Checking Records Of Other Personnel Who Are Required To Complete An Approved Training Program As Per The Operations Manual	As long as the person is in employment with the Operator
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**7 OTHER RECORDS**

Records On Cosmic And Solar Radiation Dosage If Appropriate	Until 12 Months after the crew member has left the Operator
Quality Records	Five Years
Dangerous Goods Transport Document	One Year after completion of flights
Dangerous Goods Acceptance Check List	One Year after completion of flight



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## APPENDIX 3 – CHECKLIST FOR EVALUATION OF PREPARATION AND CERTIFICATION OF OPERATIONS MANUAL

NOTE1:- THIS CHECKLIST SHALL BE USED BY THE OPERATOR WHEN SUBMITTING THE OPERATIONS MANUAL FOR ACCEPTANCE OR APPROVAL.

**S- Satisfactory U/S – Un-Satisfactory**

SECTION NS	SUBJECT	MANUAL REFERENCE	S	U/S	REMARKS
	Definitions				
<b>1.</b>	<b>GENERAL RULES FOR THE PREPARATION OF OPERATIONS MANUAL</b>				
1.1	MANUAL STANDARDS (According to SLCAP 5300)				
<b>2.</b>	<b>ADMINISTRATION OF THE OPERATIONS MANUAL</b>				
2.1	MASTER MANUALS				
<b>3.</b>	<b>REQUIRED TECHNICAL SAFETY EVALUATIONS</b>				
3.1	REVISIONS THAT REQUIRE AN APPROVAL				
3.2	OTHER APPROVAL OR ACCEPTANCE CONSIDERATIONS				
<b>4.</b>	<b>STRUCTURE OF THE OPERATIONS MANUAL</b>				
4.1	PART A: GENERAL				
4.2	PART B: AIRCRAFT OPERATING INFORMATION				
4.3	PART C: AREAS, ROUTES AND AERODROMES				



4.4	PART D: TRAINING				
<b>5.</b>	<b>OPERATIONS MANUAL - PART A - GENERAL</b>				
5.1	Chapter – 1 ADMINISTRATION AND CONTROL OF OPERATIONS MANUAL				
5.1 (a)	Introduction				
5.1 (b)	System of amendment , revision and distribution				
5.2	Chapter – 2 ORGANISATION AND RESPONSIBILITIES				
5.2 (a)	Organizational structure				
5.2 (b)	Nominated post holders responsibilities of operations personnel pertaining to the conduct of flight operations				
5.2 (c)	Authority, duties and responsibilities of the Pilot in Command.				
	i. Authority of Pilot in Command of an aircraft				
	ii. Responsibility of Pilot-in-Command for compliance with the rules of the air				
	iii. Reporting acts of unlawful interference				
	iv. Flight preparation				
	v. In-flight fuel management				
	vi. Flight recorders are not switched off during flight time, Flight recorders continued serviceability, preserve flight recorder records, flight recorders deactivated upon completion of flight time following an accident or incident.				
	vii. procedures for the PIC to report promptly to ATC a suspected communicable disease				
5.2 (d)	Authority, Duties and responsibilities of all flight crews other than the commander				



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5.2 (e)	Authority, Duties and responsibilities of cabin crew members				
5.2 (f)	Authority, Duties and responsibilities of Flight Operations Officers / Flight Dispatcher				
5.3	Chapter – 3 OPERATIONAL CONTROL AND SUPERVISION				
5.3 (a)	Procedure for monitoring of validity of Licenses				
5.3 (b)	Procedure for monitoring of validity of all other qualifications / requirements				
5.3 (c)	Detail of the Safety Management System				
5.3 (d)	Aircraft Tracking				
5.3 (e)	Operational control				
5.3 (f)	Powers of the Civil Aviation Authority, Sri Lanka				
5.4	Chapter – 4 QUALITY SYSTEM				
5.4 (a)	description of the quality system				
5.5	Chapter – 5 AEROPLANE FLIGHT CREW				
5.5 (a)	Procedure for determining crew composition				
5.5 (b)	Operator's policy applicable to the designation of the Pilot in Command				
5.5 (c)	The flight crew for each type of operation including the designation of the succession of Command				
5.5 (d)	Operation of more than one type				
5.6	Chapter – 6 QUALIFICATION REQUIREMENTS				
5.6.1	Flight Crew				
5.6.2	Operator's procedures to ensure Recent experience				
5.6.3	Pilot-in-command area, route and aerodrome qualification				
5.6.4	Operator's procedure to Pilot proficiency check (PPC)				
5.6.5	Language proficiency				
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5.6.6	Cabin crew				
5.6.7	Flight / Ground Instructors and personnel delegated with Checking functions				
5.6.8	Flight Operations Officer / Flight Dispatcher				
5.7	Chapter – 7 CREW HEALTH PRECAUTIONS				
5.7.1	Crew health precautions				
5.7.2	Procedures and instructions to ensure Use of psychoactive substance				
5.7.3	Flight crew equipment				
5.8	Chapter – 8 FLIGHT TIME, FLIGHT DUTY PERIODS, DUTY PERIODS AND REST PERIODS FOR FATIGUE MANAGEMENT				
5.8.1	limitation on flight time, flight duty periods, duty periods and rest periods for flight crews and cabin crew members for fatigue management				
5.8.2	Information and policy relating to fatigue management				
5.9	Chapter – 9 AEROPLANE PERFORMANCE OPERATING LIMITATIONS				
5.9.1	Mass limitations				
5.9.1 (a)	Take-off.				
5.9.1 (b)	Take-off obstacle clearance limitations				
5.9.1 (c)	En route limitations				
5.9.1 (d)	En route – one engine inoperative.				
5.9.1 (e)	En route – two engines inoperative.				
5.9.1 (f)	Landing.				
5.10	Chapter – 10 OPERATING PROCEDURES				
5.10.1.1	Operational certification and supervision				
5.10.1.2	Method of determine Operating Facilities				



5.10.1.3	method of determination and application of minimum flight altitudes				
5.10.1.4	Criteria and responsibilities for the authorization of the use of aerodromes				
5.10.1.5	Alternate aerodromes				
5.10.1.6	Methods for establishing of aerodrome operating minima.  a. Operator's method for establishing aerodrome operating minima for IFR flights.  b. Aerodrome operating minima for each aerodrome to be used  c. Operator's procedure to conduct Category II and Category III instrument approach and landing operations RVR information				
5.10.1.7	Determination of the quantities of fuel, oil and water methanol carried.				
5.10.1.8	Instructions for Mass and balance control.				
5.10.1.9	Procedures and responsibilities for the preparation and submission of the air traffic services flight plan				
5.10.1.10	Procedures and responsibilities for the preparation and acceptance of the operational flight plan				
5.10.1.11	Procedures for Meteorological information				
5.10.1.12	Operators Maintenance Control Manual				
5.10.1.13	Operators Maintenance program				
5.10.1.14	Procedure for Continuing airworthiness				
5.10.1.15	Procedure for Maintenance release				
5.10.1.16	responsibilities and the use of the operator's aeroplane technical log				



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5.10.1.1 7	Operator's Policy on the use of MEL and CDL				
5.10.1.1 8	Procedures for aeroplane journey log book				
5.10.1.1 9	Operational control and Flight Dispatch procedure				
5.10.1.2 0	flight following requirement and procedures				
5.10.1.2 1	Emergency Response plan				
5.10.1.2 2	List of documents, forms and additional information to be carried in the aeroplane				
5.10.1.2 3	procedure for the preservation and storage of records				
5.10.1.2 4	Procedure for ensure current aeroplane flight manual on board				
5.10.2	Ground handling arrangements, procedures and instructions				
5.10.2.1	Operator's ground handling organization structure and lines of responsibilities  i. Ramp Operation  ii. Passenger Services  iii. Baggage Services  iv. Cabin Services  v. Weight and Balance Services  vi. Ground support equipment  vii. Fuel Services				
5.10.2.2	Operator's ground handling policy and procedures				
5.10.2.3	Ground handling policy in respect of service providers				
5.10.2.4	ground handling arrangements				
5.10.2.5 (a)	Safety precautions during refueling and defueling including when an APU is in operation				



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5.10.2.5 (b)	Re fuelling and de fuelling when passengers are on board				
5.10.2.6	Procedures for safety on Ramp				
5.10.2.7	Procedures for the refusal of embarkation				
5.10.2.8	De-icing and anti-icing policy and procedures for aeroplanes on the ground.				
5.10.3.1	description of the policy for allowing flights to be made under VFR, or IFR				
5.10.3.2	A list of navigational equipment to be carried by aircraft type, route and area				
5.10.3.2 (C)	procedures and training requirement for PBN				
5.10.3.2 (d)	procedures and training requirement for minimum navigation performance specifications (MNPS)				
5.10.3.2 (e)	procedures for operations and training requirement of reduced vertical separation minimum (RVSM)				
5.10.3.2 (f)	Procedure for Electronic navigation data management				
5.10.3.2 (g)	Procedure for Charts				
5.10.3.3	Procedure for portions of airspace or on routes where an RCP type has been prescribed.				
5.10.3.4	Altimeter setting procedures				
5.10.3.5	Altitude alerting system procedures				
5.10.3.6	In-flight fuel management				
5.10.3.7	Flight procedures in icing conditions				
5.10.3.8	Use of autopilot and auto throttle in IMC				
5.10.3.9	procedures for noise abatement				
5.10.3.1 0	Standard Operating procedures (SOP) for each phases of flight				
5.10.3.1	Instruction on the use of normal				



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1	checklists and the timing of their use				
5.10.3.1 2	Instructions on the clarification and acceptance of ATC clearances				
5.10.3.1 3	Departure briefing				
5.10.3.1 4	Departure contingency procedures				
5.10.3.1 5	Approach briefing				
5.10.3.1 6	Instructions for the conduct of precision and non-precision approach procedures				
5.10.3.1 7	Stabilized approach procedure				
5.10.3.1 8	Conditions required to commence or to continue an instrument approach.				
5.10.3.1 9	Allocation of flight crew duties and procedure				
5.10.3.2 0	Procedure for familiarization with areas, routes and aerodromes				
5.10.4	procedures for All Weather Operations				
5.10.5.1	ETOPS Operational procedures				
5.10.6.1	Requirements for operations beyond 60 minutes to an en-route alternate aerodrome				
5.10.6.2	Requirements for EDTO				
5.10.7	Instructions and training requirements for the avoidance of controlled flight into terrain and policy for the use of the GPWS				
5.10.8	Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of the ACAS				
5.10.9	Operating Instructions and training requirement for the use of weather radar				
5.10.10	Operating Instructions and training requirements for the use of				



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	Transponders				
5.10.11	Operating Instructions and training requirements for the use of Forward looking wind shear warning system				
5.10.12	The conditions under which oxygen shall be used and the amount of oxygen determined				
5.10.13	Procedure for loss of pressurization				
5.10.14	requirements for crew members to occupy their assigned stations or seats				
5.10.15	requirements for crew members to use safety belts and/or harnesses				
5.10.16.1	Cabin safety Procedures				
5.10.16.2	Procedure for accessible and adequate medical supplies				
5.10.16.3	The number and type of fire extinguishers				
5.10.16.4	The number and location of PBE				
5.10.17	Passenger briefing procedures				
5.10.18	Procedures to be followed in the event of incapacitation of crew members				
5.10.19	Admission to flight deck				
5.10.20	The conditions and procedures for the use of vacant crew seats				
5.10.21	Procedures for operating in, and/or avoiding adverse and potentially hazardous atmospheric conditions				
5.10.22	Wake turbulence separation criteria				
5.10.23	For aeroplanes intended to be operated above 15000 meters				
5.10.24	Additional requirements for single pilot operations under the IFR or at night				
5.10.25	Instructions for Operation of single-engine aeroplanes				



5.10.26	Operations of single-engine turbine-powered aeroplanes at night and/or in IMC				
5.10.27	Operation of Aeroplanes equipped with head-up displays (HUD) and/or enhanced vision systems (EVS)				
5.10.28	Procedures and limitations (a) Training flights; (b) Test flights; (c) Delivery flights; (d) Ferry flights; (e) Demonstration flights; and (f) Positioning flights				
5.10.29	Mountain flying				
5.10.30	Off shore operations				
5.11	Chapter – 11 DANGEROUS GOODS AND WEAPONS				
5.11.1	Information and instructions on the carriage of dangerous goods				
5.12	Chapter – 12 SECURITY				
5.12.1	Security instructions and guidance				
5.12.2	Security of the flight crew compartment				
5.12.3	Aeroplane search procedure checklist				
5.12.4	Bomb threat or warning				
5.12.5	Domestic commercial operations				
5.13	Chapter – 13 HANDLING, NOTIFYING AND REPORTING OCCURENCES				
5.13.1	Procedures for the handling, notifying and reporting occurrences				
5.13.2	Procedure for Flight recorder records				
5.13.3	Procedure for Flight recorder electronic documentation				



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5.14	Chapter – 14 RULES OF THE AIR				
5.14 (a)	Visual and instrument flight rules				
5.14 (b)	Territorial application of the Rules of the Air				
5.14 (c)	Communication procedures including COM-failure procedures				
5.14 (d)	Information and instructions relating to the interception of civil aeroplanes				
5.14 (e)	The circumstances in which a radio listening watch is to be maintained				
5.14 (f)	Signals				
5.14 (g)	Time system used in operation				
5.14 (h)	ATC clearances, adherence to flight plan and position reports				
5.14 (i)	Visual signals used to warn an unauthorized aeroplane				
5.14 (j)	Procedures for Pilot in Command observing an accident				
5.14 (k)	Procedures for pilots receiving a distress transmission				
5.14 (l)	The ground/air visual codes				
5.14 (m)	Distress and urgency signals				
5.15	Leasing Agreement				
<b>6.</b>	<b>OPERATIONS MANUAL - PART B</b>				
6.1	Chapter – 1 GENERAL INFORMATION AND UNITS OF MEASUREMENT				
6.1.1	aircraft operating information to its operating staff and flight crew				
6.1.2	General information of the aeroplane				
6.1.3	units of measurement used for the operation				
6.2	Chapter 2 LIMITATIONS				
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