

MOZAMBIQUE CIVIL AVIATION TECHNICAL STANDARDS



PART 127 MOZ-CATS-OPS 127 AIR TRANSPORT OPERATIONS – HELICOPTERS

MOZAMBIQUE CIVIL AVIATION TECHNICAL STANDARDS: CATS
RECORD OF REVISIONS

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**MOZAMBIQUE CIVIL AVIATION TECHNICAL STANDARDS:
CATS RELATING TO AIR TRANSPORT OPERATIONS – HELICOPTERS**

INTROCUCTION

1. GENERAL

Decree 41 of 2001 empowers the Director General for Civil Aviation to issue technical standards for civil aviation on the matters which are prescribed by regulation.

2. PURPOSE

Document MOZ-CATS-OPS 127 contains the standards, rules, requirements, methods, specifications, characteristics and procedures, which are applicable in respect of Air Operator operating helicopters

Each reference to a technical standard in this document, is a reference to the corresponding regulation in the Mozambique Civil Aviation Regulations, for example, technical standard 127.01.3 refers to regulation 3 of Subpart 01 of Part 127 of the Regulations.

The abbreviation “MOZ-CAR” is used throughout this document when referring to any regulation.

The abbreviation “TS” refers to any technical standard.

3. SCHEDULES AND NOTES

Guidelines and recommendations in support of any particular technical standard are contained in schedules to, and/or notes inserted throughout the technical standards.

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127.01.3 EXEMPTIONS

1. Exemptions

- (1) The Director may, on application, exempt any person or aeroplane involved in or used for emergency operations, from the provisions of Part 127, on condition that the Director is satisfied that –
 - (a) exceptional circumstances prevail which necessitates the exemption;
 - (b) there is a need for the exemption; and
 - (c) an acceptable level of safety is maintained.
- (2) The Director may determine any supplementary condition that he or she deems necessary in order to ensure that an acceptable level of safety is maintained and the public interest is served.
- (3) An application for an exemption must be made pursuant to the provisions of Part 11.

121.01.10 SUB CHARTERING

1. Sub chartering

An operator may subcharter an aeroplane or flight crew, or both an aeroplane and flight crew in circumstances where such operator is faced with an immediate, urgent and unforeseen need for a replacement aeroplane and/or flight crew.

127.02.2 CREW MEMBER EMERGENCY DUTIES

1. Emergency evacuation demonstration

An emergency evacuation demonstration must be performed by the flight crew members in accordance with the following:

- (1) Actual operation of all types of exits;
- (2) demonstration of the method used to operate a slide where fitted;
- (3) actual fire fighting using equipment representative of that carried in the helicopter on an actual or simulated fire except that, with Halon extinguishers, an approved alternative method may be used;
- (4) the effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment;
- (5) actual handling of pyrotechnics, real or simulated, where fitted; and
- (6) demonstration in the use of the life-raft (s) where fitted.

121.02.4 CABIN CREW COMPLEMENT

1. Minimum number of cabin crew

An operator must ensure that, when carrying one or more passengers, not less than one cabin crew member is carried for every 50 passenger seats, or part thereof, installed on the same deck of the helicopter: Provided that the minimum number of cabin crew members carried is not less than the number of cabin crew members who actually participated in the emergency evacuation demonstration referred to in MCAR 127.02.3 or were assumed to have taken part in the relevant analysis required during the certification of the helicopter.

127.02.5 OPERATION ON MORE THAN ONE TYPE OR VARIANT BY CABIN CREW

1. Type or variant of helicopter

- (1) With the approval of the Director cabin crew may operate on four helicopter types if emergency exits and safety equipment are similar.
- (2) When assessing if a fourth helicopter type is permissible the following factors must be taken into consideration:
 - (a) Similarity of emergency procedure and drills; and
 - (b) similarity and location of emergency equipment.
- (3) When assessing helicopter variants as same types the following factors must be taken into consideration:
 - (a) The variant has the same type of exits with identical operating mechanisms;
 - (b) emergency procedure and drills are essentially the same; and
 - (c) emergency equipment on board each variant is essentially the same and that its location is standardised. Helicopter variants not meeting these criteria are considered to be a separate helicopter type.

127.02.9 FLIGHT TIME AND DUTY PERIODS

1. Definitions

“**days off**” means periods available for leisure and relaxation, no part of which forms part of a duty period. A single day off must include two local nights. Consecutive days off must include a further local night for each consecutive day off. A rest period may be included as part of a day off;

“**duty period**” means any continuous period throughout which either a flight crew member flies in any helicopter, whether as a flight crew member or as a passenger, at the request of his or her employer, or otherwise carries out a required duty in the course of his or her employment. It includes any flight duty period, positioning at the behest of the operator, ground training, flight watch, home reserve, standby duty, or any other task or duty whether or not directly related to the operation of the company’s aircraft;

“**flight duty period**” means any time during which a person operates in an helicopter as a member of its flight crew. It starts when the flight crew member is required by an operator to report for a flight, and finishes at on-chocks or engines off, on the final sector for that flight crew member;

“**flight watch**” means a period of time during which a flight crew member be required to check with the operator at specified times as to whether his or her services as a flight crew member will be required and, should this be the case, will report for duty at the time then specified;

“**home reserve**” means a period of time during which a flight crew member must be prepared to respond to a call out for flight duties as yet unspecified. The flight crew member must report for duty within a specified time from call out;

“**local night**” means a period of eight hours falling within the ten hour period from 21h00 to 07h00 local time;

“**positioning**” means the practice of transferring flight crew from place to place as passengers in surface or air transport at the behest of the operator;

“**rest period**” means the period of time during which a crewmember is released from all official duty or contact by the company. This period must exclude all time spent commuting by the most direct route, between the company designated rest facility and assigned duty station, but in no case less than one half hour in each direction and, a specified period of prone rest with at least one additional hour provided for physiological needs;

“**split duty**” means a flight duty period which consists of two or more flight duties which are separated by less than the minimum rest period;

“**standby duty**” means a period of time during which a flight crew member is in a position to commence a flight duty at once.

2. Requirements of the MCAR

- (1) MCAR 127.02.9 requires that an operator of an helicopter must have a scheme for the regulation of flight times and duty times of his or her flight crews.

- (2) MCAR 127.02.9 also requires that a flight crew member may not fly, and an operator may not require that flight crew member to fly, if either has reason to believe that he or she is suffering or is likely to suffer while flying, from such fatigue as may endanger the safety of the helicopter or of its occupants.
- (3) Every flight crew member is required to inform the operator of all flying he or she has undertaken if the cumulative amount of such flying and any scheduled duties is likely to exceed the maximum laid down in the Regulations.

3. Operators' schemes and their approval

- (1) An operator must submit a proposed scheme for the regulation of flight time and duty periods and minimum rest periods to the Director for approval.
- (2) Any deviation from the approved scheme must be submitted to the Director for consideration.
- (3) Non-availability of auto pilot or auto stabilisation systems requires a reduction in flight time and duty period in respect of public air transport and IFR operations.

4. General principles of control of flight, duty and rest time

- (1) The prime objective of any scheme of flight time limitations is to ensure that flight crew members are adequately rested at the beginning of each flight duty period. Helicopter operators will therefore need to take account of inter-related planning constraints on –
 - (a) individual duty and rest periods;
 - (b) the length of cycles of duty and the associated periods of time off; and
 - (c) cumulative duty hours within specific periods.
- (2) Duties must be scheduled within the limits of the operator's scheme. To allow for unforeseeable delays the pilot-in-command may, within prescribed conditions, use his or her discretion to exceed the limits on the day. Nevertheless, flight schedules must be realistic, and the planning of duties must be designed to avoid as far as possible exceeding the flight duty limits.
- (3) Other general considerations in the sensible planning of duties are –
 - (a) the need to construct consecutive work patterns which will avoid as far as possible such undesirable rostering practices as alternating day/night duties and the positioning of flight crews in a manner likely to result in a serious disruption of established sleep/work patterns;
 - (b) the need, particularly where flights are carried out on a programmed basis, to allow a reasonable period for the preflight notification of duty to flight crews, other than those on standby; and
 - (c) the need to plan time off and also to ensure that flight crews are notified of their allocation well in advance.

5. Responsibilities of flight crew members

It is the responsibility of all flight crew members to make optimum use of the opportunities and facilities for rest provided by the operator, and to plan and use their rest periods properly so as to minimise the risk of fatigue.

6. Standard provisions required for an operator's scheme

- (1) The standard provisions which the Director regards as the basis for an acceptable scheme of flight and duty limitations and which, if included in an operator's scheme, will facilitate approval by the Director are contained in paragraphs 7 to 13 below.
- (2) Although operators are expected to plan their schemes in accordance with the requirements, it is however, recognised that the standard provisions will not necessarily be completely adaptable to every kind of operation. In exceptional circumstances therefore operators may apply to have variations from the standard provisions included in their schemes. However, such variations should be kept to a minimum and approval will only be granted where an operator can show that these proposed provisions will ensure an equivalent level of protection against fatigue.

7. Limitations of single flight duty periods – flight deck crew

7.1 Maximum rostered flight duty periods

The maximum rostered flight duty period (FDP) (in hours) must be in accordance with Table 1. Rostering limits in the tables may be extended by in-flight relief or split duty under the terms of paragraphs 7.2 and 7.3. On the day, the pilot-in-command may at his or her discretion further extend the FDP actually worked in accordance with paragraph 7.6.

TABLE 1: MAXIMUM FLIGHT DUTY PERIOD: HELICOPTERS
Helicopters certified for single pilot operations

Report for Duty Local Time	Single Pilot		Two Pilots	
	Max. Duty Period	Max. Flight Duty	Max. Duty Period	Max. Flight Duty
0500 – 1659	10	7	12	8
1700 – 0459	9	6	12	7

7.2 Extension of flight duty period by in-flight relief

- (1) When any additional flight crew member is carried to provide in-flight relief for the purpose of extending a FDP, he or she must hold qualifications which will meet the requirements of the operational duty for which he or she is required as a relief.
- (2) When in-flight relief is provided, there must be available, for the flight crew member who is resting, a comfortable reclining seat or bunk separated and screened from the flight deck and passengers.
- (3) A total of in-flight rest of less than three hours will not count towards extension of an FDP, but where the total of in-flight rest (which need not be consecutive) is three hours or more, the rostered FDP may be extended beyond that permitted in Tables 1 by:

- (a) If rest is taken in a bunk, a period equal to one half of the total of rest taken, provided that the maximum FDP permissible is 18 hrs (or 19 hrs in the case of cabin crew members); and
- (b) if rest is taken in a seat, a period equal to one third of the total of rest taken, provided that the maximum FDP permissible is 15 hrs (or 16 hrs in the case of cabin crew members).

The maximum extension allowable is equivalent to that applying to the basic flight crew member with the least rest.

- (4) Where a flight crew member undertakes a period of in-flight relief and after its completion is wholly free of duty for the remainder of the flight, that part of the flight following completion of duty may be classed as positioning and be subject to the controls on positioning detailed in paragraph 7.4.

7.3 Extension of flying duty period by split duty

When a FDP consists of two or more duties separated by less than a minimum rest period, then the FDP may be extended beyond that permitted in the tables by the amounts indicated below:

Consecutive hour rest	Maximum extension of the FDP
Less than 3	Nil
3 – 10	Period equal to half of the consecutive hours rest taken

The rest period must not include the time required for immediate post-flight and pre-flight duties. When the rest period is not more than six hours it will be sufficient if a quiet and comfortable place is available, not open to the public, but if the rest period is more than six consecutive hours, then a bed must be provided.

7.4 Positioning

All time spent on positioning as required by the operator is classed as duty, but positioning does not count as a sector when assessing the maximum permissible FDP. Positioning, as required by the operator, which immediately precedes a FDP, is included as part of the FDP for the purpose of paragraph 7.1.

7.5 Traveling time

- (1) Traveling time other than that time spent on positioning may not be classed as duty time and may not be included in cumulative totals of duty hours.

Note: Traveling time from home to departure aerodrome can become an important factor if long distances are involved. If the journey time from home to the normal departure aerodrome

is lengthy, flight crew members should make arrangements for accommodation nearer to their bases to ensure adequate pre-flight rest.

- (2) Where traveling time between the aerodrome and sleeping accommodation provided by the operator exceeds thirty minutes each way, the rest period must be increased by the amount of the excess, or such lesser time as is consistent with a minimum of ten hours at the sleeping accommodation.
- (3) When flight crew members are required to travel from their home to an aerodrome other than the one from which they normally operate, the assumed traveling time from the normal aerodrome to the other aerodrome is classed as positioning and is subject to the controls of positioning detailed in paragraph 7.4.

7.6 Pilot-in-command's discretion to extend a flight duty period

- (1) A pilot-in-command may, at his or her discretion, extend a FDP beyond the maximum normally permitted, provided he or she is satisfied that the flight can safely be made. In these circumstances the maximum normally permitted is calculated according to what actually happens, not on what was planned to happen. The operator's scheme must include guidance to pilots-in-command on the limits within which discretion to extend a FDP may be exercised. An extension of three hours beyond the maximum normally permitted should be regarded as the maximum, except in cases of emergency.
- (2) Whenever a pilot-in-command so exercises his or her discretion, he or she must report it to the operator and, should the maximum normally permitted be exceeded by more than two hours, both the pilot-in-command and the operator must submit a written pilot-in-command's discretion report – extension of flying duty period, to the Director within thirty days.

Notes:

1. Discretion reports either concerning extension of a flight duty period or reduction of a rest period must be submitted in the form contained in Annexure A. Those reports will be used by the Director when assessing the realism of particular schedules.

2. An emergency in respect of an extension of a flight duty period is a situation which in the judgment of the pilot-in-command presents serious risk to health or safety.

7.7 Delayed reporting time

When flight crew members are informed of a delay before leaving their place of rest the FDP starts at the new reporting time or four hours after the original reporting time, whichever is the earlier. The maximum FDP is based on the original reporting time. This paragraph does not apply if flight crew members are given ten hours or more notice of a new reporting time.

7.8 Additional limits applicable to helicopter flying

- (1) Pilots engaged in repetitive short flights, with an average of ten or more take-offs and landings per hour, must have a break of at least thirty minutes away from the aircraft within any continuous period of three hours.
- (2) Operators must specify maximum periods of continuous operation on the more demanding aspects of helicopter flying, such as winching and external-load

carrying. The limits applied should not exceed those set out in paragraph (1) but, depending on the nature and circumstances of a particular operation, may need to be more restrictive.

8. Rest periods

- (1) It is the responsibility of the operator to notify flight crew members of a flight duty period so that adequate and within reason, uninterrupted pre-flight rest can be obtained by the flight crew. Also, once a flight, or series of flights is in progress, it is normally the company's responsibility to make arrangements for transportation and adequate crew rest facilities. The operator must release the crew from duty for that purpose and in accordance with all regulatory requirements and approved company policy. Should occasions arise where unforeseen operational situations make it more expeditious for the crew members to obtain proper rest, the company may authorize the pilot in command to secure such accommodation.
- (2) Each duty period, including flight watch and home reserve, must be preceded by a rest period of at least:
 - (a) Nine consecutive hours including a local night; or
 - (b) ten consecutive hours; or
 - (c) if the preceding FDP, adjusted for split duty, exceeds eleven hours, an additional rest period must be provided for in the operator's scheme to the satisfaction of the Director.
- (3) Where a flight crew member has completed two consecutive duty periods, the aggregate of which exceeds eight hours flight time or eleven hours duty time (extensions by in-flight relief or split-duty disregarded), and the intervening rest period has been less than twelve consecutive hours embracing the hours between 11h00 and 06h00 local time, he or she must have a rest period on the ground of at least twelve consecutive hours embracing the hours between 22h00 and 06h00 local time or so much longer as to embrace these hours prior to commencing any further duties, but not necessarily larger than twenty four consecutive hours; provided that this requirement does not apply in respect of consecutive flight watch and home reserve duties.
- (4) Following sixty hours of duty of any nature associated with his or her employment, except flight watch and home reserve duty, a flight crew member must have a rest period of not less than twenty-four consecutive hours before commencing further duties.
- (5) When a flight crew member has completed a flight time and duty period in excess of eighteen hours, he or she must receive a rest period of at least eighteen hours including a local night before he or she commences any further duties.
- (6) Time on flight watch and home reserve duty may be counted towards the required rest periods preceding a period of duty.
- (7) Pilot-in-command's discretion to reduce a rest period.

A pilot-in-command may, at his or her discretion, reduce a rest period to below the minimum required by paragraph 8(2) and 12(2)(b). The exercise of such discretion

must be considered exceptional and should not be used to reduce successive rest periods. A rest period must be long enough to allow flight crew members at least eight hours, at the accommodation where the rest is taken. If a rest period is reduced, the pilot-in-command must submit a report to his or her employer, and if the reduction exceeds two hours, must submit a written report to the Director within thirty days. (See note 1 to paragraph 7.6(2)).

- (8) For the purpose of calculating the minimum rest period before commencement of duties, the required post flight duties on completion of the previous FDP is added to such FDP.

9. Duty periods

- (1) The following limits apply:

Duty	Maximum duration
Flight watch	No limit*
Home reserve	No limit*
Positioning	No maximum**
Standby	Maximum 12 hours (not necessarily consecutive) in any 24 hour period
Standby + FDP	20 hours

* However, the provisions of item (2) applies.

** However, the provisions of paragraph 7.4 applies.

- (2) For the purpose of calculating duty time, the following applies:

- (a) For the calculation of accumulated duty time in terms of paragraph 11, flight watch and home reserve is credited on the basis of eight hours for every period of twenty four or fewer consecutive hours, or on a one-for-one basis, whichever is the lesser.
- (b) Standby duty time must count fully as duty time for the calculation of accumulated duty time in terms of paragraphs 8(2)(c) and (d) and 11.
- (c) See paragraph 7.4 in respect of positioning time.

10. Days off

Flight crew members must –

- (1) not work more than seven consecutive days between days off; and
- (2) have two consecutive days off in any consecutive fourteen days; and
- (3) have a minimum of six days off in any consecutive four weeks at the aerodrome from which they normally operate; and

- (4) have an average of at least eight days off in each consecutive four week period, averaged over three such periods.

11. Cumulative duty and flying hours

Maximum cumulative duty hours: The average weekly total of duty hours may not exceed sixty hours over seven days, or fifty hours averaged over any four consecutive weeks. All types of duty, flight duty, ground duty, split duty, stand-by and positioning is counted in full for this purpose. All time required to accomplish any task or duty that has been assigned by an air operator to an aircraft crew member, in addition to flight duties, flight watch or home reserve, standby, office duties or positioning must be considered in calculating the above average weekly total of duty hours.

12. Cabin crew members

- (1) The requirements detailed in this paragraph are applicable to all cabin crew members carried as cabin crew members.
- (2) The limitations which apply to cabin crew members are those contained in paragraphs 7 to 11 applicable to flight deck crew members, but with the following adjustment:
 - (a) Rostered flight duty periods may not be more than one hour longer than those permitted to flight deck crew members and contained in paragraph 7.1. In order to remove anomalies which might arise when cabin crew members and flight deck crew members report at different times for the same flight, the maximum FDP for cabin crew members must be based on the time at which the flight deck crew start their flight duty period.
 - (b) Rostered minimum rest periods must not be more than one hour shorter than those required by flight deck crew and contained in paragraph 8(2).
 - (c)
 - (i) For the purpose of a FDP extension following in-flight rest by cabin crew members, a period of a minimum of two consecutive hours of rest must allow for the extension of such FDP by half the actual rest period.
 - (ii) Where in-flight rest is provided for more than three hours, the provisions of paragraph 8.2(iii) apply.
 - (d) The combined sum of standby duty and following FDP may not exceed twenty-one hours.
 - (e) The average weekly total of duty hours may not exceed fifty-five hours.
 - (f) The annual and monthly limits on flying hours need not be applied.

13. Records to be maintained

An operator must retain all pilot-in-command discretion reports of extended flight duty periods and reduced rest periods for a period of at least six months.

127.03.1 TRAINING OF FLIGHT CREW MEMBERS

1. Training syllabus

The training syllabus for flight crew members required in terms of MCAR 127.03.1, is –

- (1) the syllabus prescribed in Parts 61 for initial training;
- (2) the syllabus prescribed in TS 127.03.3 and 127.03.11 for conversion training;
- (3) the syllabus prescribed in TS 127.03.7, 127.03.13, 127.03.14 and 127.03.15 for recurrent training and checking and refresher training; and
- (4) the syllabus prescribed in Part 92 for initial and refresher dangerous goods training courses.

127.03.3 CONVERSATION TRAINING

1. Operator's conversion training course syllabus

- (1) An operator's conversion course syllabus must include the following items:
 - (a) Ground training and checking including helicopter systems, normal, abnormal and emergency procedures;
 - (b) emergency and safety equipment training and checking which must be completed before helicopter training commences;
 - (c) cockpit crew resource management training;
 - (d) helicopter/flight simulator training and checking; and
 - (e) line flying under supervision and line check.
- (2) The conversion course must be conducted in the order set out in subparagraph (1) above.

2. Flight deck crew resource management training

The flight deck crew resource management training referred to in MCAR 127.03.3(1)(h) is the flight deck crew resource management training contemplated in TS 127.03.5.(1).

127.03.5 UPGRADING TO PILOT-IN-COMMAND

1. Flight deck crew resource management training

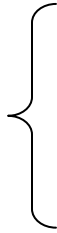
1.1 Procedures

- (1) If the flight deck crew member has not previously completed an operator's conversion course then the operator should ensure that a flight deck crew resource management (CRM) course with a full length syllabus is completed. The flight deck crew member should not be assessed either during or upon completion of this course.
- (2) If the flight deck crew member undergoes a subsequent conversion course with the same or a change of operator, he or she should complete the appropriate elements of the CRM course. The flight deck crew member should not be assessed either during or upon completion of this training.
- (3) Recurrent training:
 - (a) Where an operator utilizes line orientated flying training (LOFT) in the recurrent training programme, the flight deck crew member should complete elements of CRM training. The flight deck crew member should not be assessed.
 - (b) Where an operator does not utilize LOFT, the flight deck crew member should complete elements of CRM training every year. The flight deck crew member should not be assessed.
 - (c) An operator should ensure that flight deck crew members complete the major elements of the full length CRM course over a four year recurrent training cycle. The flight deck crew member completing this refresher training should not be assessed.
 - (d) When a flight deck crew member undergoes an operator proficiency check, line check or command course, then CRM skills should be included in the overall assessment.
- (4) Operators should, as far as is practicable, provide combined training for flight deck crew and cabin crew.
- (5) There should be an effective liaison between flight deck crew and cabin crew training departments. Provision should be made for flight deck and cabin crew instructors to observe and comment on each others training.
- (6) The successful resolution of aeroplane emergencies requires interaction between flight deck crew and cabin crew and emphasis should be placed on the importance of effective coordination and two-way communication between all flight deck crew members in various emergency situations. Initial and recurrent CRM training should include joint practice in aeroplane evacuations so that all who are involved are aware of the duties other flight crew members should

perform. When such practice is not possible, combined flight deck crew and cabin crew training should include joint discussion of emergency scenarios.

1.2 Objective and contents

- (1) CRM is the effective utilisation of all available resources (e.g. flight crew members, aeroplane systems and supporting facilities) to achieve safe and efficient operation.
- (2) The objective of CRM is to enhance the communication and management skills of the flight deck crew member concerned. The emphasis is placed on the non-technical aspects of flight deck crew performance.
- (3) CRM training should include the following elements:
 - (a) Statistics and examples of human factor related accidents;
 - (b) human perception, learning process;
 - (c) situational awareness;
 - (d) management of workload, tired-ness or fatigue, and vigilance – management of stress;
 - (e) operator's standard operating procedures;
 - (f) personality type, delegation, leadership, effective communication skills;
 - (g) the CRM loop:



Inquiry (or explore, examine, scrutinize)
 Conflict resolution
 Decision making
 Critique
 Feedback
 - (h) effective communication and co-ordination within the flight deck crew, and between flight crew members and other operational personnel (air traffic controllers, maintenance personnel etc);
 - (i) error chain and taking actions to break the error chain; and
 - (j) implications of automation on CRM.
- (4) CRM training should also address the nature of the operator's operations as well as the associated flight crew operating procedures. This will include areas of operations which produce particular difficulties, adverse climatological conditions and any unusual hazards.
- (5) CRM training should include both:
 - (a) Classroom training; and

- (b) practical exercises including group discussions and accident reviews to analyse communication problems and instances or examples of a lack of information or flight crew management.
- (6) Ideally, the CRM training course should last a minimum of 3 days, but providing the whole syllabus is covered, then a 2 day course may be acceptable. A one day course for single pilot operations may be acceptable.
- (7) As part of the operations manual, the CRM course (for conversion and recurrent training) will be approved by the Director. An operator may use a course provided by another operator, if that course has already been accepted.

127.03.7 RECURRENT TRAINING AND CHECKING

1. Flight deck crew resource management training

The flight deck crew resource management training referred to in MCAR 127.03.7, is the flight deck crew resource management training contemplated in TS 127.03.5.1.

127.03.10 INITIAL TRAINING

1. Aim of training course

The aim of the cabin crew member training course is to train aspiring cabin crew members to the level of proficiency required for the issue of a cabin crew member licence. The course must comprise:

- (1) A theoretical knowledge course;
- (2) a practical training course;
- (3) an aviation security course; and
- (4) a first aid course.

2. Theoretical knowledge course

The theoretical knowledge course must consist of the following subjects:

- (1) Aviation - general
 - (a) regulatory overview
 - (b) aviation terminology
 - (c) theory of flight
 - (d) physiology of flight
 - (e) flight deck observation flight
- (2) Responsibilities
 - (a) operator
 - (b) cabin crew member
 - (c) civil aviation inspector
- (3) Safety procedures
 - (a) crew coordination
 - (b) communication
 - (c) surface contamination
 - (d) briefings

- (e) pre-flight and safety checks
- (f) passenger handling
- (g) passenger and flight crew seats/restraints
- (h) cabin baggage
- (i) electronic devices
- (j) service to passengers on the ground
- (k) fuelling with passengers on board
- (l) pre-take-off and pre-landing
- (m) propeller abnormalities
- (n) apron/ramp safety
- (o) turbulence
- (p) crew member incapacitation
- (q) flight deck protocol
- (r) fuel dumping
- (s) post flight duties
- (t) oxygen administration
- (4) Emergency procedures
 - (a) fire fighting
 - (b) smoke/fumes in the cabin
 - (c) rapid decompression and decompression problems
 - (d) evacuations
- (5) Emergency equipment
 - (a) equipment overview
- (6) Aircraft specific subjects
 - (a) physical description
 - (b) galleys
 - (c) communication systems

- (d) lighting system
- (e) water and waste systems
- (f) heating and ventilation systems
- (g) oxygen systems
- (h) exits
- (i) unique features

3. Practical training course

The practical training course must consist of the following drills and checks:

- (1) Public address system and interphone system drill;
- (2) passenger briefing drill;
- (3) aircraft exit operation drill;
- (4) evacuation drill;
- (5) life raft drill;
- (6) aircraft slide drill;
- (7) fire fighting drill;
- (8) oxygen equipment drill;
- (9) pre-flight check;
- (10) pre-take-off check;
- (11) pre-landing check;
- (12) post landing check; and
- (13) pilot incapacitation drill.

4. Aviation security course

The aviation security course must consist of the following subjects:

- (1) Introduction to operator security
 - (a) Requirement for cabin crew members to comply with minimum aviation security standards prescribed by the IACM and organisation security policies/ procedures
 - (b) An overview of passenger screening, carry-on baggage screening, checked baggage security, mail/cargo security as it relates to cabin crew members.

- (c) Responsibilities of holders of airport restricted areas passes including the requirement to challenge persons in restricted areas who are not wearing passes.
 - (d) Protection of cabin crew members' personal belongings.
 - (e) Flight crew baggage – identification/procedures.
 - (f) Protection of organisation property – manuals, procedures, uniforms, passes, videos, identification and inadvertent communication of information.
 - (g) An overview of the regulations pertaining to operator security and the minimum aviation security standards and other aeronautical legislation pertaining to security issues, prescribed by the IACM.
- (2) Passenger security
 - (a) Pilot-in-command's authority.
 - (b) Restraint of passengers.
 - (c) Crew procedures for passenger restraint.
 - (d) Procedures on the ground.
 - (e) Assault by passengers on cabin crew members.
 - (f) Passenger restraining equipment.
 - (g) Disruptive/intoxicated passengers.
 - (h) Carriage of persons in custody/ deportees.
 - (i) Measures relating to VIP passengers.
- (3) Security of the aircraft
 - (a) Communication between cabin crew members of possible threats to security.
 - (b) Pre-flight checks/inspection of an aircraft prior to departure (cabin).
 - (c) Admittance to the flight deck operating crew, passengers and IACM inspectors.
 - (d) Measures to prevent unauthorised access to aircraft not in service.
 - (e) Security measures relating to catering.
 - (f) Post-flight checks/inspections of an aircraft after landing (cabin).
- (4) Management of security incidents
 - (a) An understanding of the role and responsibilities of aerodrome operators, police and other agencies in the management of a security incident.

- (b) Requirement to report incidents and procedures.
 - (c) Information required at time of reporting a security related incident.
- (5) Definitions

The cabin crew members must have the knowledge of the following terms:

 - (a) Bomb threat;
 - (b) disembarking/evacuation;
 - (c) explosives disposal expert;
 - (d) firearms;
 - (e) hijacking;
 - (f) peace officer;
 - (g) restricted area;
 - (h) sabotage;
 - (i) sterile area; and
 - (j) weapon
- (6) Bomb threats - aircraft on the ground
 - (a) Crew advisory/briefing.
 - (b) Disembarkation/evacuation.
 - (c) Search of the aircraft after disembarkation/evacuation.
 - (d) Re-entering the aircraft.
 - (e) Communication with passengers.
 - (f) Communication with authorities and organisation.
- (7) Bomb threat - aircraft in flight
 - (a) Pilot-in-command responsibilities.
 - (b) Crew advisory/briefing.
 - (c) Communication with passengers.
 - (d) Search of the aircraft while in flight.
 - (e) Awareness of components of an explosive device.

- (f) Locating a suspect device.
- (g) Protecting a suspect device.
- (h) Awareness of procedure employed when moving a suspect device.
- (i) Areas of lowest risk for re-locating of suspect device.
- (j) Disposal of suspect device over-board.
- (k) Disembarkation/evacuation upon landing.
- (l) Re-entering the aircraft.
- (m) Communication with authorities and organisation.
- (8) Hi-jacking
 - (a) Crew-advisory/briefing.
 - (b) Company policies.
 - (c) General tactics.
 - (d) Tactics specific to on-flight.
 - (e) Tactics specific to on-ground.
 - (f) Coded signals.
 - (g) Conclusion of hi-jack incident.
 - (h) Communication with authorities and organisation.

5. First aid

The first aid course must consist of the following subjects:

- (1) Principles of first aid
 - (a) Objectives of first aid
 - (b) Responsibility of cabin crew member
 - (c) First aid equipment and materials
- (2) In-flight medical emergency scene management
- (3) Casualty assessment and movement/ positioning
 - (a) Examine and assess a casualty
 - (b) Move and positioning a casualty

- (4) Artificial respiration - adult
 - (a) Respiratory emergencies
 - (b) Mouth-to-mouth direct method of artificial respiration
 - (c) Mouth-to-mouth direct method of artificial respiration - casualty with a suspected neck injury.
 - (d) Follow-up care - restored breathing
- (5) Artificial respiration - child and infant
 - (a) Artificial respiration - child
 - (b) Mouth-to-mouth and nose method of artificial respiration - infant
- (6) Choking - Adult, child and infant
 - (a) Causes of choking
 - (b) Recognise choking
 - (c) Choking adult and child
 - (d) The methods by which a conscious choking adult and child can assist themselves.
 - (e) The first aid for a complete airway obstruction on a simulated, choking adult and child casualty when the adult or child is -
 - (i) conscious;
 - (ii) conscious who becomes unconscious; and
 - (iii) found unconscious.
 - (f) State two instances when chest thrusts should be used on an adult casualty:
 - (i) Advanced pregnancy; and
 - (ii) markedly obese.
 - (g) State how to perform chest thrusts on a woman casualty in the advanced stages of pregnancy or a markedly obese casualty:
 - (i) Conscious; and
 - (ii) unconscious.
 - (h) Choking infant
 - (i) Follow-up care - complete airway obstruction

- (k) Allergic reaction
- (l) Describe the treatment:
- (m) Respiratory emergencies
- (n) First aid - Respiratory emergencies
- (7) Shock, unconsciousness, fainting, stroke and seizures
 - (a) Shock.
 - (b) Shock positions.
 - (c) Levels of consciousness.
 - (d) Unconscious casualty.
 - (e) Fainting.
 - (f) First aid - fainting.
 - (g) Recognise a stroke.
 - (h) First aid - stroke.
 - (i) Epileptic seizure.
 - (j) First aid - epileptic seizure.
 - (k) Convulsions - children and adults.
 - (l) First aid - convulsions - children and adults.
- (8) Wounds and bleedings
 - (a) External and internal bleeding
 - (b) Contamination and infection of wounds
 - (c) Control external bleeding from wounds
 - (d) External bleeding from a wound - embedded object
 - (e) First aid - internal bleeding
 - (f) First aid - nose bleed
 - (g) First aid - protruding intestines
 - (h) Tourniquets
- (9) Fractures, dislocations and sprains

- (a) Fractures
 - (b) Rules of first aid - fractures
 - (c) Immobilise a fracture of the forearm
 - (d) Immobilise a fracture of the lower leg
 - (e) Immobilise a fracture of the femur
 - (f) Immobilise a fracture of the clavicle
 - (g) Joint injuries
 - (h) First aid - joint injuries
 - (i) Immobilise joint injuries
- (10) Burns
 - (a) List the types of burns:
 - (b) State the classification of burns:
 - (c) First aid - burns
- (11) Miscellaneous conditions I
 - (a) Head injury
 - (b) First aid - head injury
 - (c) Spinal injury
 - (d) Unconscious casualty - suspected spinal injury
 - (e) Acute abdominal distress (acute abdomen)
 - (f) Acute abdominal distress
 - (g) Poison emergencies
 - (h) First aid - poison by ingestion
 - (i) Diabetic emergencies
 - (j) First aid - diabetic emergencies
- (12) Miscellaneous conditions II
 - (a) Earache (Barotrauma)
 - (b) Sinusitis

- (c) First aid - earache and sinusitis
- (d) Hyperventilation
- (e) First aid - hyperventilation
- (f) Air sickness
- (g) First aid - air sickness
- (13) Aviation medicine (physiology of flight)
 - (a) The physiology of respiration and circulation.
 - (b) Identify the body's requirement for oxygen and the potential for flight crew member incapacitation due to lack of oxygen.
 - (c) Describe the most common physio-logical effects of altitude and the pressurised cabin, including but not limited to dehydration, effects of trapped gases and water retention.
 - (d) Effect of altitude
- (14) CPR - Adult, child and infant
 - (a) Cardiac arrest
 - (b) One-rescuer CPR adult, child and infant
- (15) Emergency childbirth
 - (a) Childbirth - imminent
 - (b) Preparations - emergency delivery
 - (c) First aid - emergency delivery
- (16) Death on board
- (17) Self medication
- (18) Frostbite, hypothermia
 - (a) Cold injuries
 - (b) First aid - cold injuries
- (19) Hypothermia
 - (a) Heat illnesses
 - (b) First aid - heat illnesses
- (20) Toothache

- (a) Toohache
- (b) First aid - toothache
- (21) Environment - passengers with respiratory problems
 - (a) Describe the precautions to be taken when the interior of aircraft has been sprayed with disinfectants or insecticides.
- (22) Most commonly used medication
 - (a) Analgesics (painkillers, antihistamines, anti- allergic, anti congestants, blocked nasal passages).
 - (b) Appetite suppressants
 - (c) Anti-acids
 - (d) Anti nausea drugs
 - (e) Anti diarrhoea
 - (f) Anti hypertensive drugs (for high blood pressure)
 - (g) Flight environment changes
 - (h) Social chemical substances
 - (i) Recommendations
 - (i) Don't use over the counter medication on flight duty unless you have cleared it with your designated aviation medical examiner.
 - (ii) Avoid taking different types of medications simultaneously.
 - (iii) If taking "allowable" medication while on flight duty, monitor your performance and skills continuously and ask colleagues to co-monitor your performance.
 - (iv) If temporarily on medication which makes grounding mandatory, remember that the body should be clear of all that medicine. This may take several days after the last dosage has been taken.

Notes:

1. Equipment and procedures criteria

Training programme content and delivery must be consistent with the amount and type of equipment carried on the operator's aircraft and the operator's procedures that have been published. This should be as practical as possible.

2. Regulatory approval process

Any organisation conducting cabin crew member training must be approved by the Commissioner in terms of Part 141.

127.03.11 TYPE AND DIFFERENCES TRAINING

1. General

An operator must ensure that –

- (1) type and differences training is conducted by suitably qualified persons; and
- (2) during type and differences training, training is given on the location, removal and use of all emergency and survival equipment carried on the helicopter, as well as all emergency procedures and emergency training related to the helicopter type, variant and configuration to be operated.

2. Fire and smoke training

An operator must ensure that either –

- (1) each cabin crew member is given realistic and practical training in the use of all fire fighting equipment including protective clothing representative of that carried in the helicopter. This training must include –
 - (a) each cabin crew member extinguishing a fire characteristic of a helicopter interior fire except that, in the case of Halon extinguishers, an alternative extinguishing agent may be used; and
 - (b) the donning and use of protective breathing equipment by each cabin crew member in an enclosed, simulated smoke-filled environment; or
- (2) each cabin crew member fulfils the recurrent training requirements of TS 127.03.12.

3. Operation of doors and exits

An operator must ensure that –

- (1) each cabin crew member operates and actually opens all normal and emergency exits for passenger evacuation in a helicopter or representative training device; and
- (2) the operation of all other exits is demonstrated.

4. Evacuation slide training

An operator must ensure that –

- (1) each cabin crew member descends an evacuation slide from a height representative of the helicopter main deck sill height;
- (2) the slide is fitted to a helicopter or a representative training device; and

- (3) a further descent is made when the cabin crew member qualifies on a helicopter type in which the main deck exit sill height differs significantly from any helicopter type previously operated.

5. Evacuation procedures and emergency situations

An operator must ensure that –

- (1) emergency evacuation training includes the recognition of planned or unplanned evacuations on land or water. This training must include recognition of when exits are unusable or when evacuation equipment is unserviceable; and
- (2) each cabin crew member is trained to deal with the following:
 - (a) An in-flight fire, with particular emphasis on identifying the actual source of the fire;
 - (b) severe air turbulence; and
 - (c) other in-flight emergencies.

6. Crowd control

An operator must ensure that training is provided on the practical aspects of crowd control in various emergency situations, as applicable to the helicopter type.

7. Pilot incapacitation

An operator must ensure that, unless the minimum flight crew is more than two, each cabin crew member is trained to assist if a pilot becomes incapacitated. This training must include a demonstration of –

- (1) the pilot's seat mechanism;
- (2) fastening and unfastening the pilot's seat harness;
- (3) use of the pilot's oxygen equipment; and
- (4) use of pilots' checklists.

8. Safety equipment

An operator must ensure that each cabin crew member is given realistic training on, and demonstration of, the location and use of safety equipment where applicable, including the following:

- (1) Life-rafts, including the equipment attached to, and/or carried in, the raft;
- (2) life-jackets, infant life-jackets and flotation cots;
- (3) first aid oxygen;
- (4) fire extinguishers;

- (5) fire axe or crow-bar;
- (6) emergency lights including torches;
- (7) communications equipment, including megaphones;
- (8) survival packs, including their contents;
- (9) pyrotechnics (actual or representative devices);
- (10) first aid kits, their contents and emergency medical equipment; and
- (11) other cabin safety equipment or systems where applicable.

9. Passenger briefing/safety demonstrations

An operator must ensure that training is given in the preparation of passengers for normal and emergency situations in accordance with MCAR 91.07.20.

127.03.13 RECURRENT TRAINING

1. Aviation – general

1.1 Regulatory overview

1.1.1 Training objective

The cabin crew member must identify and describe the legislation relating to flight crew members.

1.1.2 Syllabus

- (1) Identify and describe the specific regulations applicable to flight crew members and cabin safety and outline the applicable operator's policies and procedures including –

- (a) seatbelts and related restraint systems;
- (b) survival equipment, ie life rafts, life vests, survival kits;
- (c) oxygen equipment;
- (d) first aid kits;
- (e) minimum equipment lists;
- (f) floor proximity lighting;
- (g) cabin fire protection;
- (h) flight crew stations;
- (i) infant (ie definition of);
- (j) minimum flight crew requirements;
- (k) passenger safety briefings;
- (l) emergency duties;
- (m) passenger safety briefing cards;
- (n) surface contamination training;
- (o) carry-on baggage;
- (p) aircraft journey log/cabin logbook (equivalent);
- (q) liquor/drugs;

- (r) refuelling (fuelling with one engine running);
- (s) emergency equipment;
- (t) survival equipment;
- (u) duty time limitations – flight crew/cabin crew;
- (v) crew rest – flight crew/cabin crew;
- (w) designated flight crew rest areas/policies;
- (x) cabin crew manual as part of operations manual;
- (y) non-smokers legislation; and
- (z) take-off and landing stations.

1.2 Physiology of flight

1.2.1 Training objective

The cabin crew member will be able to identify and describe the most common physiological effects of flight in pressurized and non-pressurized aircraft including likely causes, recognition and ways to minimize these effects.

1.2.2 Syllabus

- (1) General (Reserved.)
- (2) Effect of altitude
 - (a) Define what is meant by decompression sickness and describe the physiological effects of pressure changes on gases in the body. Define 'safe' times between scuba-diving and flight.
 - (b) Define what is meant by hypoxia, the hazards associated with it, signs and symptoms, ways to detect it and minimize its effects.
 - (c) Define time of useful consciousness and factors affecting it.
 - (d) Describe the effects of oxygen deficiency on human performance and identify the importance of recognizing these signs and symptoms in other flight crew members.
 - (e) Identify persons most susceptible to the effects of hypoxia.
 - (f) Describe the effects of altitude on night vision and the impact this has on flight safety and personal safety.

1.3 Drills: Cockpit observation flights

1.3.1 Training objective

The cabin crew member will be able to recognize the duties and expectations of flight crew members as they apply to different helicopters the cabin crew member will be operating on.

1.3.2 Syllabus

(1) General

- (a) Flight crew communication and flight crew coordination depend on each flight crew member having an understanding of each other's duties, responsibilities, workloads and expectations for all phases of flight. While this knowledge can be taught in a classroom, a more valid forum would be in an actual operating environment.
- (b) At least one cockpit observation flight will be completed prior to a cabin crew member becoming qualified and thereafter on an annual basis. The following conditions will apply:
 - (i) Cabin crew members will be in uniform; however they will be in addition to the minimum flight crew and will not be assigned any normal safety or cabin service duties;
 - (ii) each cockpit observation flight will include a minimum of 2 take-offs and 2 landings over a total flight time of not less than 1 hour;
 - (iii) each cockpit observation flight will begin at the regular check-in time for the cockpit crew. Cabin crew members will observe the normal pre-flight pilot duties ie. flight planning, weather briefing, cockpit crew briefing, pre-flight walk-around:
 - (A) Cockpit workloads and safety duties;
 - (B) flight crew communication procedures;
 - (C) flight crew coordination procedures; cockpit layout;
 - (D) location of emergency equipment;
 - (E) location and operation of cockpit windows;
 - (F) location and operation of cockpit escape hatches;
 - (G) location of controls and operation of pilot and observer seats;
 - (H) location and operation of cockpit oxygen; and
 - (I) location of emergency checklists.
- (c) Each cabin crew member will participate in a post-flight debriefing on the cockpit observation flight.

2. Roles and responsibilities

2.1 Cabin crew members

2.1.1 Training objective

The cabin crew member will be able to describe their legislated roles and responsibilities relating to their duties and in the interests of aviation safety.

2.1.2 Syllabus

(1) General

- (a) Describe the responsibility of cabin crew members to maintain knowledge of all safety and emergency procedures relating to their duties.
- (b) Identify the requirement for cabin crew members to perform their duties in accordance with the operations manual.
- (c) Outline cabin crew member responsibilities to ensure all flight documentation, publications, manuals are up to date and available on board and that cabin crew members are familiar with their contents. Cabin crew members are required to ensure that –
 - (i) competency qualification documents signed by the authorised operator personnel, as designated in the operations manual, date of expiry, specific helicopter types and series which the cabin crew member is qualified to operate on;
 - (ii) a record of revisions is in the FAM tracking the amendments received and when they were inserted into the FAM;
 - (iii) all amendments are inserted in the appropriate section of the FAM and not in their issued format, ie stapled, cello-wrapped; and
 - (iv) operations manual and revisions – see roles and responsibilities.
- (d) Identify the responsibility of cabin crew members to report any on board safety concerns to the pilot-in-command.
- (e) Identify the requirement to keep all documentation relative to flight duties up to date at all times ie. passport, security pass.
- (f) Outline cabin crew member responsibilities to ensure that all equipment and supplies are available and in good working order.
- (g) Review the responsibility of cabin crew members to report unserviceable equipment following established operator procedures.
- (h) Review the responsibility for cabin crew members to successfully complete required training and qualifications.

- (i) Define the chain-of-command and describe the authority of the pilot-in-command and describe their importance relating to flight safety.
- (j) Describe the requirement to be aware of the duties and responsibilities of other flight crew members and be prepared to assume those duties, if necessary.
- (k) Define the procedure regarding attending and participating in cabin crew briefings.
- (l) Describe a cabin crew member under training and the duties they may perform when assigned to a flight.
- (m) Review the importance of cabin crew members to be constantly alert and therefore prepared to handle any abnormal/emergency situation as it may occur.
- (n) Identify the importance of cabin crew members to be constantly alert and therefore prepared to handle any abnormal/emergency situation as it may occur.
- (o) Identify uniform policies and the importance of the uniform as an identifier especially in abnormal and emergency situations, and the operator's policy regarding the wearing of uniform in an emergency.

3. Safety procedures

3.1 Flight crew coordination

3.1.1 Training objective

The cabin crew member will review the components of flight crew coordination and its importance to operational safety.

3.1.2 Syllabus

- (1) Describe the importance of flight crew coordination when applying approved procedures.
- (2) List the positive effects of flight crew coordination in enhancing flight safety.
- (3) Outline the benefits of flight crew coordination on working environment and morale and the effect this has on flight safety.
- (4) Define the one crew concept and list ways this may be achieved.
- (5) Review the importance of flight crew coordination especially in abnormal and emergency situations.
- (6) Discuss how poor flight crew coordination has contributed to aviation accidents and incidents and outline strategies to improve flight crew coordination.
- (7) Cockpit crew to be included in the review discussions.

3.2 Communication

3.2.1 Training objective

The cabin crew member will be able to describe and demonstrate the importance and the procedures for effective communication in normal, abnormal/non-routine and emergency situations.

3.2.2 Syllabus

(1) General

- (a) Describe the procedures for normal, abnormal/non-routine and emergency communication.
- (b) Describe the importance of effective communication especially when dealing with abnormal and emergency situations.
- (c) Describe the responsibility of cabin crew members to provide complete and accurate information to the pilot-in-command to assist in decision-making.

(2) Communication

- (a) Review the difference between verbal and non-verbal communication and describe the effects of communicating different messages. Describe the potential hazards to flight safety if communication is not effective.
- (b) Review how poor communication has contributed to aviation accidents and incidents and discuss ways to minimize these communication deficiencies.

3.3 Surface contamination

Not Applicable

3.4 Briefings

3.4.1 Training objective

The cabin crew member will be able to identify the different types of briefings which are required by the operations manual and the information which must be included in each.

3.4.2 Syllabus

(1) Cabin crew briefings

- (a) Identify the importance of cabin crew briefings including enhancing cabin crew communication and coordination, establishing expectations and clarifying procedures. (Where operationally practicable, the pilots and cabin crew members should be encouraged to combine their briefings.)
- (b) Outline when cabin crew briefings are required including normal, abnormal and emergency situations.

- (c) Identify the types of flight crew briefings, ie pilot-in-command/ cabin crew member and senior cabin crew member/other cabin crew members.
 - (d) Describe the topics to be covered in the cabin crew briefing(s).
 - (e) Identify the cabin crew member responsibility to ask questions if all the required information has not been given in a briefing or if the information is unclear.
 - (f) Identify who is required to attend each type of briefing and their expected level of preparedness and participation.
- (2) Passenger briefings
- (a) Review the contents of the following mandatory announcements and when they must be performed:
 - (i) Cabin baggage;
 - (ii) pre-flight safety announce-ment/demonstration;
 - (iii) after take-off;
 - (iv) en route turbulence;
 - (v) pre-landing;
 - (vi) after landing; and
 - (vii) individual pre-flight briefing for special attention passengers.

3.5 Pre-flight checks

3.5.1 Training objective

The cabin crew member will be able to identify the importance of pre-flight checks and will define what is meant by the aircraft minimum equipment list.

3.5.2 Syllabus

- (1) General
 - (a) Identify the importance of pre-flight checks and the impact on flight safety.
 - (b) Define what is meant by the Minimum Equipment List and identify the cabin items which are included.
 - (c) Identify types of conditions which may have airworthiness implications and which should be brought to the immediate attention of the pilot-in-command ie. cracked windows, damaged door seals, excessive water spills or leaks, obvious structural damage.

3.6 Passenger handling

3.6.1 Training objective

The cabin crew member will be able to identify the types of passenger which may be carried and the general handling considerations which relate to safety.

3.6.2 Syllabus

(1) General

- (a) Identify the requirement for passengers to comply with instructions of flight crew members.
- (b) Describe the types of passengers which may be carried including passengers who require special handling.
- (c) Describe the procedures for acceptance and carriage of the following and include special handling considerations, seating and securing the persons and the equipment for all phases of the flight:
 - (i) Incubators;
 - (ii) stretchers;
 - (iii) disabled persons;
 - (iv) persons travelling with medical oxygen;
 - (v) child restraint system; and
 - (vi) guide and service animals.
- (d) Identify the operator's policy for accepting or denying boarding to passengers and who is responsible for making this decision.
- (e) Identify the procedures for handling special passengers including safety briefings and seating restrictions on different helicopter types.
- (f) Outline the regulatory requirements regarding passengers who appear to be impaired due to alcohol or drugs, and the operator's policies and procedures regarding alcohol service to passengers. Include cabin crew responsibilities in serving passengers who appear to be impaired.

(2) Passenger boarding

- (a) Define cabin crew member responsibilities for passenger supervision while the helicopter is on the ground, including boarding, disembarking and station stops. Include the number of cabin crew members that must be present in the helicopter for the above.
- (b) Review the importance of safety duties over service duties during passenger boarding.

3.7 Passenger and flight crew seats/restraints

3.7.1 Training objective

The cabin crew member will be able to identify the requirements and established procedures relating to on board seating for passengers and flight crew members.

3.7.2 Syllabus

(1) Passenger seating

- (a) Outline the requirement for each person to have a seat with an individual safety belt.
- (b) Define exit row and describe the operator's policy and procedures regarding exit row seating, and who may not occupy seats in these rows.
- (c) Describe the procedures associated with the relocation of passengers in compliance with exit row seating policies.
- (d) Describe where special attention passengers may be seated, taking into consideration proximity to exits, availability of supplemental oxygen, ease of evacuation etc.
- (e) Identify the passenger seating restriction on helicopters equipped with upper deck/lower deck passenger seating where applicable.
- (f) Outline the seating restrictions regarding arm held infants.
- (g) Describe the procedures for the use of on board skycots, stating when these devices may be used, and restrictions regarding the occupant of the skycot.
- (h) Describe the requirement for passengers to be seated in their assigned seats for take-off, landing and whenever advised by a cabin crew member. Describe the required positioning of seats for take-off and landing.
- (i) Describe the different types of seat belts/harnesses found on passenger seats on helicopters in the fleet, and the correct method of operation for each.
- (j) Identify any placards or signage associated with passenger seating and describe appropriate usage. Example: "Seat Unserviceable", "For Crew Use Only".

(2) Flight crew seating

- (a) Identify the persons authorized to occupy any of the flight crew seats on board and who has the authority to make this decision.
- (b) Describe the importance of ensuring serviceability of cabin crew seats, who is responsible to ensure this, when to check serviceability.

- (c) Identify the components of a pre-flight serviceability check for a cabin crew seat eg. “sit and fit” to enable quick access.
- (d) Describe the procedures to follow and approved alternate seating in case of an unserviceable cabin crew seat.
- (e) Describe the requirements for cabin crew to be seated with restraint system fastened for taxi (except for safety related duties), take-off, landing and turbulence whenever directed to do so by the pilot-in-command.
- (f) Identify rationale behind wearing the seat belt and shoulder harness and the hazards of improper use.

Examples: “Seat Unserviceable”, “For Crew Use Only”.

- (g) Identify the signals/verbal command for cabin crew members to take their assigned seats and to secure themselves. State who is responsible for these signals.

3.8 Cabin baggage

3.8.1 Training objective

The cabin crew member will be able to define what is meant by cabin baggage and will describe the procedures for accepting and stowing cabin baggage and any applicable restrictions.

3.8.2 Syllabus

(1) Passenger cabin baggage

- (a) Describe cabin baggage policies and procedures with respect to approved storage areas.
- (b) Identify the safety implications of improperly stowed cabin baggage.
- (c) Identify the cabin crew responsibilities for ensuring that all carry-on baggage is correctly stowed when required.
- (d) Describe the operator’s procedures for dealing with carry-on baggage that cannot be correctly stowed.
- (e) Outline the operator’s policies and procedures for the carriage of live animals in the passenger cabin.
- (f) Describe the cabin crew responsibility for monitoring cabin baggage security during flight.
- (g) Identify the effects of cabin baggage on weight and balance (as applicable to the operator’s fleet).

- (h) Describe the approved procedures for accepting and restraining seat-loaded baggage and cargo in the passenger cabin, and approved devices/equipment for accomplishing this.
 - (i) Describe the requirement to keep the exit areas clear and free from obstructions, such as cabin baggage.
 - (j) Describe the requirement to maintain clear access to emergency equipment.
 - (k) Describe safety precautions for cabin personnel when opening overhead bins, and when handling items of cabin baggage in order to prevent personal injury.
- (2) Flight crew carry-on baggage
- (a) Describe the policies and procedures for stowing flight crew baggage in the passenger cabin including accepting baggage from deadheading flight crew.
 - (b) Identify the flight crew carry-on baggage stowage locations for each helicopter type.

3.9 Electronic devices

3.9.1 Training objective

The cabin crew member will be able to define what is meant by electronic devices, and describe policies and procedures for their acceptance and use on board helicopters.

3.9.2 Syllabus

- (1) General
- (a) Identify the electronic devices most likely to be carried on board helicopters.
 - (b) List the potential hazards to flight safety associated with these electronic devices.
 - (c) Describe the operator's policy/procedures relating to electronic devices and list exceptions to these regulations.
 - (d) Review the safety concerns associated with the use of "walkman" type headsets during critical phases of flight, abnormal operations, boarding and disembarking across an open ramp.

3.10 Service to passengers on the ground

3.10.1 Training objective

The cabin crew member will be able to review what is meant by service to passengers on the ground, the conditions under which this can be accomplished and the procedures to do so.

3.10.2 Syllabus

(1) Cabin crew responsibilities

- (a) Review the need for flight crew communication and whenever passenger service is being offered on the ground, ie cabin crew to let pilot know service is taking place and pilot to let cabin crew know how much time before take-off.
- (b) State the requirement for the pilot-in-command to give cabin crew adequate notice prior to take-off so that equipment and supplies may be stowed and pre-take-off duties can be completed.

3.11 Fuelling with passengers on board

3.11.1 Training objective

The cabin crew member will be able to identify the regulatory requirements regarding fuelling with passengers on board and the procedures established for this situation.

3.11.2 Syllabus

(1) General

- (a) List the potential hazards associated with fuelling helicopters to occupants and the helicopter.
- (b) Identify the types of fuelling procedures which require that passengers and flight crew be off-loaded and why the potential hazard is greater.
- (c) Describe the procedures and precautions for fuelling with passengers on board.
- (d) Define what is meant by designated evacuation exits during fuelling and associated procedures.

(2) Cabin crew responsibilities

- (a) Identify flight crew responsibilities and communication when fuelling with passengers on board.
- (b) Describe the fuel leak or spill procedures and identify the communication and coordination procedures cabin crew members are responsible for as contained in the operations manual.
- (c) Describe the procedures whenever fumes are detected in the cabin including flight crew communication and the decision to disembark passengers.

3.12 Pre-take-off and pre-landing

3.12.1 Training objective

The cabin crew member will be able to identify safety procedures associated with take-off and landing and be able to implement them.

3.12.2 Syllabus

- (1) Cabin crew responsibilities
 - (a) Describe safety related information that should be conveyed and the requirement to be clear, concise, specific and timely.
 - (b) Define “silent review” and identify the components, when it must be done and who is required to complete it.
- (2) Abnormal situations
 - (a) Define “rejected take-off”, and describe the associated procedures.
 - (b) Define “missed approach” and describe the associated procedures.
 - (c) Define abnormal landing situations.
 - (d) Identify cabin, galley and passenger safety checks.

3.13 Rotor abnormalities

3.13.1 Training objective

The cabin crew member will be able to identify the characteristics of rotor abnormalities and be aware of the procedures associated with this situation.

3.13.2 Syllabus

- (1) General
 - (a) Define what is meant by rotor abnormalities and emergencies that may occur as a result.
 - (b) Describe how to recognize rotor malfunctions and their effect on flight characteristics.
 - (c) Identify the flight crew communication procedures associated with these rotor abnormalities.
 - (d) Outline the procedures for relocating passengers.
 - (e) Identify rotor abnormalities.

3.14 Heliport safety

3.14.1 Training standard

The cabin crew member will be able to identify the components of heliport safety, the responsibilities for passenger movement on heliports and the procedures established to accomplish this safety.

3.14.2 Syllabus

- (1) Hazards on heliports
 - (a) Identify the hazards associated with heliports, example: heliport/ground service traffic, noise and weather, foreign objects.
 - (b) Describe the hazards associated with traffic on the heliport including helicopter movement, propellers, jet blast/exhaustion vehicles.
- (2) Cabin crew responsibilities
 - (a) Identify the established procedures and requirements for escorting passengers across the heliport.
 - (b) Describe the coordination required between cabin crew members and ground staff to ensure passenger safety ie. stairs in place, props are secured and ways to achieve it.
- (3) Operations
 - (a) List the heliport safety hazards associated with helicopter operations.
 - (b) Describe the correct ways to approach a helicopter with and without the rotor engaged.
 - (c) Identify communication and coordination procedures between flight crew and ground staff to ensure passengers are escorted to and from the helicopter.
 - (d) Describe when it is safe to board/disembark passengers and who is responsible for this decision, and the how this information is conveyed to cabin crew members.
 - (e) Describe operational regulations differing from fixed wing operations.

3.15 Turbulence

3.15.1 Training objective

The cabin crew member will be able to identify the hazards associated with turbulence and the procedures for ensuring passenger and cabin crew safety during periods of in-flight turbulence.

3.15.2 Syllabus

- (1) General

- (a) Describe turbulence and the classification of turbulence ie. light, moderate, severe.(A.I.P)
 - (b) List the potential hazards to helicopters, flight crew and passengers in turbulence.
- (2) Cabin crew responsibilities
 - (a) Identify the importance of flight crew communication and flight crew coordination in conditions of turbulence and describe communication and coordination procedures.
 - (b) Describe safety advice to passengers during turbulence.
 - (c) Outline the cabin crew responsibilities to ensure that passengers comply with requirements and procedures.

3.16 Flight crew member incapacitation

3.16.1 Training objective

The cabin crew member will be able to identify the procedures for dealing with an incapacitated flight crew member.

3.16.2 Syllabus

- (1) General
 - (a) Define what is meant by incapacitated flight crew member and identify possible causes, ie. illness, injury, death, physical and mental incapacitation, food poisoning.
 - (b) Identify the impact on flight safety of an incapacitated pilot or cabin crew member on different helicopter types in the fleet.
 - (c) Identify the preferred locations for relocating incapacitated flight crew members on different helicopters in the operator's fleet.
 - (d) Identify how and where to secure an incapacitated flight crew member for landing or during periods of in-flight turbulence.
 - (e) Identify the flight crew communication procedures to advise of flight crew member incapacitation including cockpit/cabin, senior cabin crew member/other flight crew members.
- (2) Pilot incapacitation
 - (a) Identify the assistance flight crew members will be required to provide in the cockpit.
 - (b) Describe the procedures for assisting an incapacitated pilot.

- (c) Describe and demonstrate the procedures for administering first aid oxygen to an incapacitated pilot.
 - (d) Describe the procedures for removing an incapacitated pilot from the cockpit.
- (3) Cabin crew incapacitation
 - (a) Identify the cabin crew coordination procedures to ensure that the safety and emergency duties of the incapacitated cabin crew member are assumed; who is responsible for this decision.
 - (b) Outline the procedures associated with incapacitated cabin crew members (including procedures for dealing with more than one incapacitated cabin crew member).

3.17 Post-flight duties

3.17.1 Training objective

The cabin crew member will be able to identify their post-flight safety related duties.

3.17.2 Syllabus

(1) Documentation

Describe the safety related documentation which must be completed after each flight and who is responsible for its completion.

(2) Communication

In instances of a flight crew change, identify the responsibility of the flight crew to brief the new cabin crew regarding any un-serviceabilities, special passengers, any other safety related matters pertinent to their flight.

4. Emergency procedures

4.1 Fire fighting

4.1.1 Training objective

The cabin crew member will be able to identify the types of fire, fire detection and fire fighting systems and the established fire fighting procedures.

4.1.2 Syllabus

(1) General

- (a) Identify hazards associated with on board fires including toxicity of fumes, flammability of cabin materials, variety of materials to burn.
- (b) Identify the impediments to fire fighting on board helicopters including limited visibility due to smoke/fumes, fire fighting in confined space,

difficulty in locating the source of the fire, limited resources to fight the fire and distance to suitable heliport for landing.

- (c) Describe experience with fire accidents/incidents. Identify the safety lessons learned as a result.
- (d) Define fire chemistry including the elements which must be present for fire to occur ie. fuel, heat, oxygen, chemical reaction.
- (e) List the classes of fire which may occur on aircraft
 - Class A combustible material fires;
 - Class B – grease/spill fires;
 - Class C – electrical and
 - Class D – fire involving metals and the possible sources for these fires.
- (f) Describe importance of early detection and correct recognition.
- (g) Identify the characteristics and behaviour of fire (ie. what you will see, how the fire will behave) in different cabin environments, fire-propagation.
- (h) Describe the means of fire smoke detection, ie. smell, auditory, visual, touch, tactile.
- (i) Describe the chemical properties of each type of fire extinguisher including hazards to occupants and helicopter systems, how it extinguishes fire.

(2) Cabin crew responsibilities

- (a) List fire prevention measures and cabin crew responsibilities for fire prevention including but not limited to –
 - (i) practising and maintaining safe work habits;
 - (ii) enforcing smoking regulations;
 - (iii) monitoring cabin, toilets, cargo compartments;
 - (iv) awareness of popped circuit breaker procedures; and
 - (v) prompt investigation of fire detection alarms, unusual odours, heat build-up, deformation of helicopter components, etc.
- (b) Describe the importance of cabin crew coordination in fire fighting and identify ways that this may be achieved.
- (c) Describe the importance of flight crew communication in fire fighting and providing pilot-in-command with accurate information on fire source, location, extent/severity of fire/smoke, fire fighting actions.

(3) Procedures – cabin

- (a) Describe the fire fighting procedures for specific types of fires, eg. galley, oven, lavatory, electrical, upholstery, etc.
- (b) Describe the technique and procedures for fighting these fires including finding the source of the fire, type of extinguisher to use, additional fire fighting equipment needed, technique for using extinguisher, complications to fighting this type of fire, limitations to fighting this type of fire, post-fire procedures, flight crew communication and flight crew coordination procedures, passenger-handling.
- (c) Identify ways to maintain breathing comfort for cabin occupants.
- (d) Define “smoke removal”, and smoke control, and describe the associated procedures on the different types of helicopters including flight crew communication, flight crew coordination and advice to passengers.

Note: May be in the helicopter type specific.

- (e) Define flashover and flash-fire. Describe the cause of each and conditions under which each is likely to occur.

(4) Procedures – external

- (a) Identify the types of external fires which could affect flight safety included but not limited to –
 - (i) engine fires;
 - (ii) APU and engine torching;
 - (iii) fuel spill/heliport fires;
 - (iv) fires on loading bridges; and
 - (v) service vehicle fires.
- (b) Describe established procedures for dealing with these fire situations including recognition, flight crew communication and flight crew coordination.
- (c) Identify the communication and coordination required with ground personnel and describe the fire fighting assistance ground personnel can offer and the assistance cabin crew members can provide to ground personnel.

4.2 Smoke/fumes in the cabin

4.2.1 Training objective

The cabin crew member will be able to identify the hazards associated with fumes and/or smoke in the cabin, potential sources and the established procedures if fumes and/or smoke are detected in the cabin in flight or on the ground.

4.2.2 Syllabus

(1) General

Identify the possible sources of fumes and smoke in the cabin.

(2) Flight crew responsibilities

- (a) List the flight crew communication procedures associated with smoke/fumes in the cabin including how to notify the pilot-in-command of the situation and what information is required.
- (b) Describe the procedures for dealing with smoke/fumes in the cabin including locating the source, notifying the pilot-in-command, flight crew coordination, ensuring passengers' breathing comfort, preparation for rapid disembarkation or evacuation.
- (c) Describe the authority of the pilot-in-command to relocate passengers if smoke/fumes are present in the cabin and when this decision may be made.

4.3 Rapid decompressions and decompression problems

4.3.1 Training objective

The cabin crew member will be able to recognize the types of decompressions, cabin crew responsibilities and the established procedures for dealing with decompressions.

4.3.2 Syllabus

(1) General

- (a) Identify the causes of each type of decompression (pressurisation loss) ie. fuselage failure(rapid).
- (b) Describe the signs and physiological effects of each type of pressurisation loss.
- (c) Describe the effects of oxygen deficiency on human performance and identify the importance in recognising these signs and symptoms in other flight crew members.
- (d) Describe the effect of decompressions on any objects, persons in the immediate area.
- (e) Describe the likely aircraft attitude (slow or rapid descent) in case of pressurisation loss, what is meant by safe altitude and the importance of reaching a safe altitude quickly.

- (f) Identify the likely cabin conditions in all decompressions and the ways cabin crew members can ensure safety for themselves and passengers.
- (2) Cabin crew responsibilities
 - (a) Describe the flight crew and passenger communication procedures for each type of decompression.
 - (b) Identify the immediate actions cabin crew members must take in the event of decompression.
 - (c) Describe the flight crew communication procedures ie. signal for beginning a post-decompression walkaround, who is responsible for giving this signal and when it will be given.
 - (d) List the cabin flight crew member duties in a post-decompression walkaround and safety priorities.
 - (e) Identify the importance of flight crew coordination including passenger relocation during decompressions and methods of achieving this coordination.

4.4 Evacuations

4.4.1 Training objective

The cabin crew member will be able to identify the types of evacuations, cabin crew responsibilities and procedures relating to the different types of evacuation situations.

4.4.2 Syllabus

- (1) General
 - (a) Identify the types of occurrences which may require evacuation or rapid disembarkation, who is responsible for this decision and the factors to be considered when making this decision.
 - (b) Describe the operator's experience with accidents/ incidents involving rapid disembarkments and evacuation.
 - (c) Outline factors affecting survivability in evacuation such as fuselage break-up, smoke, fire etc.
 - (d) Describe the flotation characteristics of helicopters in the fleet. Identify the factors which could adversely affect helicopter flotation in water landings ie. structural damage, weight, centre of gravity, outside conditions.
 - (e) Describe the different attitudes possible as a result of accidents/incidents ie. gear collapse, shift in centre of gravity. Include the effect of different aircraft attitudes on exit usability.
 - (f) Describe the effect of environmental conditions in evacuations ie. strong winds, terrain, snow/ice.

- (g) Identify the importance of time in evacuations and how time affects survivability in different accident situations.
 - (h) Describe the type of assistance which may be available at the various heliports in the operator's route system. Include ways cabin crew members can manage the evacuation to coordinate their actions with the ground rescue personnel.
- (2) Cabin crew responsibilities
 - (a) Identify the responsibility of cabin crew members to assist passengers and fellow flight crew members in an evacuation and any limitation to this responsibility. Outline the conditions when cabin crew members should evacuate themselves.
 - (b) Describe ways to assist incapacitated passengers and fellow flight crew members in evacuations.
 - (c) Describe the importance of flight crew communication in an evacuation and the established communication signals for evacuations. Include who is responsible for activating evacuation signals.
 - (d) Identify when cabin crew members have the authority and the responsibility to initiate an evacuation.
 - (e) Identify the briefings required between cockpit crew, cabin crew and passengers in an emergency situation which may require an evacuation. Include the following information in the description:
 - (i) Who is responsible to conduct briefing?
 - (ii) When and where to conduct the briefing?
 - (iii) What information is required?
 - (iv) How to conduct the briefing including time management?
 - (f) Describe the different types of passenger behaviour (passive, aggressive and hysteric) and identify effective ways of managing passenger behaviour in evacuations.
 - (g) Identify the responsibility of cabin crew members to provide leadership in an evacuation and list ways this may be achieved.
 - (h) Define an Able-Bodied-Person (ABP). Describe the types of persons a cabin crew member would choose for an ABP, the assistance they could provide and the special briefing instructions.
 - (i) Identify the responsibility of cabin crew members to assess conditions prior to opening any exit.
- (3) Evacuation procedures

- (a) Describe the established evacuation procedures for each of the following types of evacuation:
 - (i) Land evacuation – prepared and unprepared;
 - (ii) tidal flat;
 - (iii) ditching;
 - (iv) inadvertent water landing;
 - (v) evacuation with PTV mated to aircraft; and
 - (vi) evacuation at a heliport.
- (b) Define brace position. Describe the effect of seat pitch on preferred brace positions. Identify the brace positions for cabin crew members in forward or aft-facing seats, passengers (seat orientation as appropriate), including pregnant passengers, handicapped passengers and children and infants. Describe the effectiveness of each brace position and the importance of assuming the preferred brace position to minimize injury.
- (c) Identify the signal for assuming the brace position in different evacuation situations, when it is given, who is responsible for giving it and the cabin crew responsibilities when the brace signal has been given. Identify when cabin crew members should assume the brace position if no signal has been given.
- (d) Identify the shouted commands for each type of evacuation and describe the rationale behind each of the commands. Describe ways to increase the effectiveness of commands ie. voice tone, pace, volume, diction, body language, phraseology (commands in unison).
- (e) Identify the evacuation procedures for each type of exit i.e. doors, windows, hatches, ventral exits, tailcones.
- (f) Describe the procedures for using evacuation aids ie. slides, ramps, ropes or any other evacuation aid that is provided on the operator's helicopters. Include instructions on operation, use and instructions to passengers for using these.
- (g) Identify the inflation times for the different evacuation aids ie. slides, ramps, slide/rafts. Describe how to recognize if an evacuation device is fully inflated.
- (h) Describe alternate procedures if initial inflation fails and if the inflation fails during the course of the evacuation.
- (i) Describe the preferred techniques for special attention passengers using evacuation slides ie. elderly, handicapped, passengers with guide animals.

- (j) Identify how cabin crew members can manage evacuations in adverse conditions ie. heavy smoke, darkness.
 - (k) Identify the importance of checking the cabin and cockpit, lavatories, after all passengers have been evacuated and describe how and under what conditions this should be accomplished.
 - (l) Identify the cabin crew responsibilities for removal of equipment when they evacuate the helicopter and under what conditions this should be accomplished.
- (4) Post-evacuation
 - (a) Describe the responsibilities of cabin crew members after an evacuation ie. grouping passengers, assisting with first aid.
 - (b) Identify the importance of post-crash procedures to increase survivability in each of the survival situations. Include the following:
 - (i) First aid;
 - (ii) survival priorities;
 - (iii) hazards inherent in different environments;
 - (iv) survival skills for different environments based on helicopter and equipment and supplies carried;
 - (v) survival equipment; and
 - (vi) signalling and recovery techniques.
 - (c) Identify the on board equipment and supplies which cabin crew members could remove from a helicopter after an evacuation that would enhance survivability.
 - (d) Describe the process of accident investigation and describe the official groups tasked with accident investigation, internationally and nationally. Identify their mandate and their role in aviation safety.
- (5) Accident/Incident review
 - (a) Describe the operator's accidents/incidents and accidents of other operators.
 - (b) List the factors which had a positive and a negative effect on survivability.

Note: It is acceptable to use the accident/incident data from other operators when teaching points can be universally applied.

5. Equipment overview

5.1 Training objective

The cabin crew member will be able to identify the location of each piece of safety and emergency equipment on board the operator's helicopters.

5.2 Syllabus

(1) General

- (a) Review the location of each piece of safety and emergency equipment the operator has available on board each helicopter.
- (b) Describe each piece of safety and emergency equipment the operator has available on board each helicopter on the following points:
 - (i) General description;
 - (ii) uses;
 - (iii) locations;
 - (iv) pre-flight serviceability check;
 - (v) removal from storage;
 - (vi) how to operate;
 - (vii) conditions for operation;
 - (viii) operational limitations;
 - (ix) operation under adverse conditions;
 - (x) precautions for use; and
 - (xi) care after use.

6. Helicopter specific

6.1 Galleys

6.1.1 Training objectives

The cabin crew member will be able to identify the procedures relating to the use of galleys, if applicable.

6.1.2 Syllabus

(1) General

- (a) Identify the potential hazards of spills and leaks in galleys and describe the procedures for dealing with them.

- (b) Describe what is meant by “water shut-off valves” in the galley and identify the responsibility of cabin crew members regarding these.
- (c) Identify the cabin crew procedures for dealing with any electrical malfunctions in the galley.
- (d) Where galleys are located on the lower deck, include the following:
 - (i) Policies and procedures relating to lower deck galleys;
 - (ii) maximum number of persons allowed in the lower deck galley;
 - (iii) communication procedures with lower galley cabin crew member; and
 - (iv) escape routes from the lower deck galley.
- (e) Identify the procedures relating to lifts ie. cart-lifts/dumb waiter, how and when they are to be operated, safety features, alternate procedures if lift becomes unserviceable.

6.2 Lighting system

6.2.1 Training objective

The cabin crew member will be able to identify the different components of the interior and exterior lighting systems and be able to use them effectively in any situation.

6.2.2 Syllabus

(1) General

- (a) Describe the components of the interior and exterior emergency lighting systems including portable components.
- (b) Describe the duration of components of the emergency lighting system.
- (c) Identify the responsibilities for activating components of the lighting system in normal and emergency situations.
- (d) Describe the alternate procedures for use in case of system failure.

6.3 Water and waste systems

6.3.1 Training objective

The cabin crew member will be able to implement the correct procedures relating to these systems.

6.3.2 Syllabus

(1) General

- (a) Identify the potential threat to flight safety in case of large leaks of either the water or the waste system.
- (b) Describe the cabin crew responsibilities for the operation/ malfunctions of the water and waste system.
- (c) Describe the shut-off valves, importance, location, operation and identification.

6.4 Oxygen systems

6.4.1 Training objective

The cabin crew member will be able to recognize the components of the fixed oxygen systems and be able to use the systems effectively in any on board situation.

6.4.2 Syllabus

(1) General

- (a) Describe the components of the oxygen system on board the helicopter, including cockpit, cabin sources and galleys.
- (b) Describe when each of the oxygen system components is used. Include description of use for first aid, decompression and supplemental purposes.
- (c) Identify the location of the components of the oxygen system including the location of O₂ masks and spares.
- (d) Identify alternate procedures to access oxygen mask when the system fails.
- (e) Describe the flight crew communication procedures required to activate the oxygen system.

6.5 Heating and ventilation systems

6.5.1 Training objective

The cabin crew member will be able to identify the components of the heating and ventilation systems and be able to implement correct procedures relating to these systems.

6.5.2 Syllabus

(1) General

- (a) Identify the location of the heating and exhaust vents which cabin crew members need to be aware of.
- (b) Describe any flight crew communication and flight crew coordination procedures when using the heating and ventilation system.

- (c) Identify conditions that may occur in the cabin associated with the system ie. condensation, glycol fumes and residual oil smoke.

6.6 Exits

6.6.1 Training objective

The cabin crew member will be able to identify the features of different types of exits and be able to effectively use them in any on board situation.

6.6.2 Syllabus

(1) General

- (a) Identify safety precautions associated with exit operation. Include potential hazards, eg. inadvertent slide deployment, injury to flight crew and ground personnel, etc.
- (b) Identify the MEL relief given to operators when a door or slide is inoperative. Outline the conditions for this relief to be granted and the procedures which must be followed.

(2) Normal operation

- (a) Describe the procedures for operating the exit in normal mode including arming/disarming and opening/closing.
- (b) Identify the precautions associated with using this exit in normal mode/situations.
- (c) Describe the flight crew communication and coordination procedures, including any established signals associated with exit operation in normal situations. Identify who is responsible for ensuring that this communication occurs and the importance of this communication for flight safety.

(3) Abnormal operation (non-routine)

- (a) Describe the procedures for abnormal/non-routine operation of this exit, including who is responsible for the exit operation, flight crew communication and flight crew coordination procedures.
- (b) Identify any precautions for abnormal/non-routine operation of this exit.

(4) Emergency operation

- (a) Describe the procedures for operating the exit in emergency mode.
- (b) Identify the precautions for using this exit in emergency situations.
- (c) Describe any alternate procedures for use of this exit in the event it becomes unserviceable.
- (d) Identify the visual indicators that verify the off-wing slide, ramp is inflated.

- (e) Describe the procedures for operating the airstairs in normal, abnormal and emergency situations. Identify the cabin crew member responsibility for airstair operation.
- (f) Identify the precautions relating to use of the airstairs.
- (g) Describe the flight crew communication and the coordination procedures whenever the airstairs are being used.

6.7 Unique features

6.7.1 Training objective

The cabin crew member will be able to recognize the unique features of this helicopter type or differences within the type as a result of interior configuration or manufacturer series differences.

6.7.2 Syllabus

(1) General

- (a) Identify any features, procedures and/or equipment unique or different to each helicopter in the operator's fleet eg. electrical outlets, main deck cargo compartment fire/smoke detection systems.
- (b) Describe each of the differences, their impact on the operator's standard operating procedures and the importance to flight safety of cabin crew members being familiar with them.
- (c) Identify the function of circuit breakers in electrical panels and describe the procedures for tripped circuit breakers including reset and cabin crew communication procedures. Describe the potential hazards to flight safety if circuit breaker procedures are not followed.

7. Drills

7.1 Passenger briefing drills

7.1.1 Equipment criteria

Demonstration equipment representative of all of the equipment used on the helicopters in the operator's fleet.

7.1.2 Performance criteria

Each cabin crew member will perform each of the following:

- (1) Pre-flight safety briefing to a special attention passenger (ie. blind, physically disabled,unaccompanied minor);

- (2) individual briefing to an ABP (ie. exit operation, crowd control, assisting a special attention passenger, assistance on the ground, life raft removal and launching); and
- (3) perform a full passenger pre-flight safety demonstration (ie. signs, seat belts, exits, oxygen, life jacket, floor level lighting, safety features card etc.)

7.1.3 Evaluation criteria

Cabin crew member performance will be observed, rated and debriefed according to –

- (1) completeness of briefing content (ie. all relevant points included);
- (2) effective usage of communication techniques (ie. clarity, comprehension, absence of jargon for special attention and ABP briefing);
- (3) correctly modified in accordance with requirements of the individual to whom briefing is being delivered;
- (4) proper usage of eye contact body language;
- (5) correct usage and simulation of the operation of each piece of demonstration equipment;
- (6) synchronizes demonstrations with announcement;
- (7) displays confidence and leadership;
- (8) displays openness and ability to answer questions; and
- (9) verifies that briefing points were understood.

7.2 Aircraft operation drills for each aircraft type

7.2.1 Equipment criteria

- (1) Each drill will be performed using the appropriate helicopters or an approved training device.
- (2) Individual helicopter exits may be substituted by an approved equivalent and as authorized in the training program. Exits equipped with slides must include slide attached or slide drag simulation for emergency mode operations.
- (3) Floor level exits for which operations are identical under both normal and emergency conditions and which are a routine cabin crew member responsibility to open under normal conditions may be excluded from the drills specified under 7.2.2.

7.2.2 Performance criteria

- (1) Each cabin crew member will operate each floor level exit type, for each helicopter type in the emergency mode that was not operated in the conduct of the drills required in 7.3.3 and perform the following:

- (a) Recognise the signal for and/or the conditions under which the exit is to be opened in the emergency mode;
 - (b) verify the exit is in the correct mode;
 - (c) assess conditions outside the exit to determine exit usability (ie. clear of obstruction, fire, aircraft attitude);
 - (d) position escape device;
 - (e) open the exit in the emergency mode;
 - (f) secure exit in the fully open position;
 - (g) pull the manual inflation handle(s) and verify deployment inflation of ramp, slide);
 - (h) assume and maintain appropriate protective body and hand positions; and
 - (i) physically identify release handle(s) (ie. slide disconnect, ventral stairs, etc).
- (2) Each cabin crew member will operate each cabin window or hatch exit type for each helicopter type that was not operated in the drills required in 7.3.3 and perform the following:
- (a) Recognise the signal for and/or the conditions under which the exit is to be opened;
 - (b) assess conditions outside the exit to determine exit usability (ie. clear of obstruction, fire, aircraft attitude);
 - (c) open and correctly stow the exit;
 - (d) verbally describe correct exit placement following removal, if the training procedure differs from the operational procedure;
 - (e) pull the manual inflation handle(s) and verify deployment, inflation of ramp, slide;
 - (f) assume and maintain appropriate protective body and hand positions;
 - (g) physically identify location of the escape tapes or escape ropes; and
 - (h) physically identify release handle(s) (ie. slide disconnect, tailcone jettison etc.)

7.2.3 Evaluation criteria

Cabin crew member performance will be observed, rated and debriefed according to the following:

- (1) Acknowledgment and timely responses to signals;

- (2) assessment of the conditions outside the exit to determine exit usability (ie. clear of obstruction, fire, aircraft attitude);
- (3) correct usage of exit operating mechanisms including hand and body position;
- (4) usage of proper terminologies and procedures;
- (5) correctly positions escape device;
- (6) secures exit in the fully opened position or ensures correct stowage position of exit door, window or hatch;
- (7) pulls manual inflation handle (s) and verifies deployment and inflation of evacuation slide, ramp;
- (8) assumes and maintains appropriate protective hand and body positions;
- (9) correctly identifies release handle(s) (ie. slide disconnect, tailcone jettison, ventral stairs); and
- (10) correctly applies procedures (ie. positioning of seatbacks, armrest, tray tables).

7.3 Evacuation drills

7.3.1 General

- (1) Evacuations are emergency situations which cabin crew members must effectively manage using their knowledge of procedures and the resources available to them. Skills are developed and maintained through practice.
- (2) It is recognized that on helicopters with more than one cabin crew member, an evacuation will likely involve multiple exits and cabin crew members. Therefore, where a drill is performed on a helicopter with more than one cabin crew member, the drill scenario will involve a “typical” number of cabin crew members. Where a cabin simulator is used to conduct the drills, the number of cabin crew members who could participate at any time, will be appropriate to the cabin simulator configuration.
- (3) Each participant will perform the designated evacuation responsibilities for the assigned position. Where a double cabin crew member seat is available and would normally be occupied by two cabin crew members, the drill will be conducted to reflect this reality.
- (4) A cabin crew member who is qualified exclusively on helicopters operating with one cabin crew member and who is being qualified on helicopters with more than one cabin crew member, must perform at least one drill with additional cabin crew members.

7.3.2 Simulation scenarios

- (1) An evacuation drill is a training and evaluation scenario which must portray an operational flight and include abnormal and emergency occurrences and interaction amongst cabin crew members (if applicable), other cabin crew members and passengers.
- (2) A drill scenario should not incorporate excessive or multiple unrelated variables that would overload a cabin crew member nor should it be limited so that there is reduced value to the exercise. The variables should differ in sequence from one drill to the next and can include, but are not limited to, the following:
 - (a) Unserviceable exits;
 - (b) inflation devices that fail or only partially inflate;
 - (c) aircraft attitude which will necessitate a decision to use the exit or redirect passengers;
 - (d) poor visibility (ie. darkness, smoke);
 - (e) incapacitated flight crew members;
 - (f) exits which become unusable during the evacuation;
 - (g) special needs passengers (ie. elderly, handicapped);
 - (h) passengers in panic (ie. positive, negative, false leadership);
 - (i) failure of helicopter emergency systems (ie. lighting, evacuation signal, communication);
 - (j) decompression; and
 - (k) exits which require the use of non-standard “commands” (ie. ramp with slide).

7.3.3 Unprepared land and unprepared water evacuation drill performance criteria

- (1) Each cabin crew member will perform at least one land and one unprepared water evacuation drill that incorporates the procedures pertinent to a specific exit and perform the following; or
- (2) provided the operator establishes and maintains a method to record the type of drill performed by each cabin crew member and the drill types are alternated annually, each cabin crew member will perform at least one land or one unprepared water evacuation drill that incorporates the procedures pertinent to a specific exit and perform the following:
 - (a) Secure themselves in a cabin crew member seat;
 - (b) recognise that an emergency situation is developing and react appropriately to the drill scenario;
 - (c) apply all applicable commands;

- (d) recognise when and how to initiate the evacuation, (ie. commands, evacuation horn);
- (e) activate emergency lights, evacuation horn;
- (f) locate and don life jacket and command passengers as appropriate;
- (g) assess conditions inside and outside the exit to determine exit usability throughout the evacuation;
- (h) prepare and open the exit;
- (i) secure exit in fully open position or ensure correct stowage;
- (j) pull inflation handle(s) and verify deployment, inflation of ramp, slide;
- (k) assume appropriate protective position;
- (l) initiate passenger evacuation;
- (m) final cabin and cockpit checks, and remove required emergency equipment;
- (n) evacuate helicopter/trainer correctly;
- (o) physically identify location of escape tapes or escape ropes; and
- (p) physically identify release handle(s) (ie. slide disconnect, ventral stairs, tailcone jettison etc.)

7.3.4 Evaluation criteria

Cabin crew member performance will be observed, rated and debriefed according to the following:

- (1) Correct usage of the seat mechanism, restraint system and brace position as appropriate for seat direction and location;
- (2) correct and timely reaction to emergency situations;
- (3) consistent usage of appropriate terminologies (ie. commands, ABP briefings) with clear, positive authoritative communication techniques, as appropriate for drill scenario;
- (4) activates emergency lights, evacuation horn;
- (5) selects appropriate exit for the evacuation scenario and the helicopter type;
- (6) assessment of the conditions inside and outside the exit to determine exit usability throughout evacuation (ie. clear of obstruction, fire, aircraft attitude);
- (7) preparation and correct operation of exit;

- (8) secures exit in the fully open position or ensures correct stowage;
- (9) pulls inflation handle(s) and verifies deployment, inflation of slide, ramp;
- (10) assumes and maintains appropriate protective body and hand positions;
- (11) effective usage of able-bodied persons for special needs passengers (ie assisting outside helicopter and directing people away from the helicopter or onto flotation devices, crowd control, etc);
- (12) adequacy of cabin checks, removal of equipment and additional supplies as scenario and operator procedures dictate;
- (13) correctly identifies release handle (s) (ie. slide disconnect, tailcone jettison, ventral stairs);
- (14) correct application of procedures as related to scenario; and
- (15) consequences of errors.

7.3.5 Crew prepared evacuation drill performance criteria

Each cabin crew member must participate in at least one prepared land evacuation drill or at least one ditching evacuation drill and perform the following:

- (1) Recognize the in-flight emergency signal from the cockpit and react according to procedures;
- (2) prepare passengers, cabin and self according to procedures and scenario;
- (3) select and brief able-bodied passengers to assist as required, opening non-crewed exits, crowd control, buddy-up with special needs passengers, assisting outside helicopter and directing people away from the helicopter or onto flotation devices;
- (4) recognize the emergency brace and evacuation signals and react accordingly;
- (5) activate emergency lights, evacuation horn;
- (6) prepare and operate exits;
- (7) evacuate passengers;
- (8) final cabin and cockpit checks, remove required emergency equipment; and
- (9) evacuate helicopter/trainer.

7.3.6 Evaluation criteria

Cabin crew member performance will be observed, rated and debriefed according to the contents of 7.3.4 and the following:

- (1) Correct application of emergency landing preparation procedures;

- (2) awareness of and appropriate response to passenger behaviour;
- (3) communication acknowledgement;
- (4) accuracy in briefing of ABPS;
- (5) debrief will include a discussion with all participants describing, in general terms, procedures and responsibilities which must be completed following and as appropriate to evacuation scenarios (ie. flotation devices, equipment, location, movement of passengers to a safe area, protection from the elements, first aid, etc.)

7.4 Life raft drill

7.4.1 Equipment criteria

Life raft drill must be conducted using life saving equipment that is representative of that which is installed on each helicopter type with respect to weight, dimensions, appearance, features and operation.

7.4.2 Performance criteria

- (1) Each cabin crew member will participate in a life raft drill once every third annual training year and perform the following:
 - (a) Access the raft compartment and experience the difficulty associated with moving the weight of a packaged life raft within a space representative of the aircraft aisle;
 - (b) examine all features of a fully inflated raft;
 - (c) board raft(s), assist persons into raft;
 - (d) access the inflation lanyard;
 - (e) access the slide, raft quick release mechanism while verbally describing the procedure to release the life raft from the helicopter; and
 - (f) examine the life raft survival kit and components.
- (2) Participate as a cabin crew member or a passenger in the following:
 - (a) Launching, inflating, and disconnecting raft(s) either actual or by video;
 - (b) righting overturned rafts;
 - (c) effective raft management, (ie. distribution of passengers, deploying sea anchor, etc);
 - (d) erecting the raft canopy;
 - (e) distribution of duties to passengers;

- (f) discuss the hazards associated with moving a packaged life raft through the cabin to an exit (ie. inadvertent inflation, passenger movement and panic); and
- (g) water survival principles, a review of the operations of survival kit components including raft maintenance.

7.5 Life jacket drill

7.5.1 Equipment criteria

Life jackets used for this drill must be representative of those most commonly carried on the helicopter.

7.5.2 Performance criteria

Each cabin crew member must perform the following:

- (1) Observe removal of life jacket from closed pouch;
- (2) don life jacket;
- (3) locate and review operation of inflation toggles;
- (4) partially inflate one chamber of life vest orally;
- (5) practice deflation technique;
- (6) locate and review light activation;
- (7) locate whistle; and
- (8) fit life jacket.

7.6 Helicopter slide drill

7.6.1 Equipment criteria

- (1) The evacuation slide must be representative of the type installed in the helicopter with respect to the following categories:
 - (a) Inflatable, double lane slides;
 - (b) inflatable slide and ramp combination;
 - (c) inflatable, single lane slides.
- (2) Non-inflatable slides must be representative of the type installed in the helicopter.

7.6.2 Performance criteria

Each cabin crew member will perform a helicopter slide drill according to the following:

- (1) Inflatable evacuation slide
 - (a) Slide down an inflatable slide from each of the categories; or
 - (b) slide down an inflatable slide from one of the categories, and for each other slide category, view a video which depicts slide, ramp activation and inflation, both externally from a side angle and a slide base angle and internally from the cabin crew member protected position, including slide inflation sound, and slide disconnect sequence; or
 - (c) for each slide category view a video which depicts: slide, ramp activation and inflation, both externally from a side angle and a slide base angle and internally from the cabin crew member protected position, including slide inflation sound and slide disconnect sequence.
- (2) Non inflatable evacuation slide

Where the evacuation slide is not door mounted, each cabin crew member must retrieve the slide(s) from its stowed location and attach the evacuation slide clips to the appropriate “D” rings on door frames.

7.7 Fire fighting drills

7.7.1 General

- (1) Drill scenarios will provide each cabin crew member with the opportunity to merge procedural knowledge with practical skills. Their ability to successfully react to different fire situations will enhance their level of confidence and their ability to deal with fires in flight.
- (2) Cabin fire fighting drills may include class A, B, C fires in the following locations:
 - (a) cabin area (ie. under seat, overhead bin, closet);
 - (b) galley area (ie. garbage bin, upper electrical panel, oven);
 - (c) confined area (ie. waste bin, lavatory); and
 - (d) hidden (ie. behind panels).

7.7.2 Equipment criteria

- (1) Fire fighting drills will be conducted using furnishings representative of those found on the operator’s helicopters as appropriate to the drill scenario (ie. such as seats, galley units, panels, waste bins, etc);
- (2) Fire fighting equipment and the brackets used for restraint must be representative to those installed in the helicopter with respect to weight, dimensions, controls, types and operations. Fire extinguishers used for live fire fighting must be charged with the appropriate agent or with an environmentally friendly agent. Protective Breathing Equipment (PBE) consisting of portable

oxygen bottle and full face mask must be charged with oxygen. Self contained PBE may be substituted with a training smoke hood which is not operational.

7.7.3 Live fire fighting

Each cabin crew member must demonstrate the effectiveness of a fire extinguisher correctly applied to extinguish an actual fire once every third annual training year, while wearing PBE.

7.7.4 Cabin fire fighting drill performance criteria

Each cabin crew member must participate in a fire fighting drill in a cabin environment involving at least one cabin crew member and a passenger(s) and perform the following:

- (1) Recognise that there is a potential fire situation (ie. smoke detector signal or unusual fumes, odours etc.);
- (2) locate the source of fire;
- (3) apply communication and coordination procedures;
- (4) select, remove and operate the nearest appropriate fire extinguisher and other fire fighting equipment;
- (5) control of passengers; and
- (6) monitor for re-ignition, and apply post-fire follow-up procedures.

7.7.5 Evaluation criteria

Cabin crew member performance will be observed, rated and debriefed according to the following:

- (1) Recognition or identification of the problem;
- (2) correctly locates the source of the fire (ie. tactile search, use of crash axe, etc);
- (3) effective communication/coordination procedures throughout the drill (ie. notifying fellow flight crew members of the situation, providing clear, concise and consistent information to the pilot-in-command, advice and assistance to passengers);
- (4) response in a timely manner;
- (5) correct use of fire fighting equipment consistent with the type of fire, location of the fire and maximum effective position of the fire extinguisher;
- (6) undertake further action as required; and
- (7) consequences of error.

7.7.6 Equipment practice

Each cabin crew member who does not operate the following equipment in the drill in 7.7.4 must demonstrate the ability to use fire fighting equipment and perform the following:

- (1) Remove from stowage, don and activate PBE and practice communication;
- (2) remove from stowage and operate each type of fire extinguisher (uncharged) and associated attachments (ie. extinguisher fitted with hose attachment, extension (wand), etc.);
- (3) don each piece of protective clothing; and
- (4) initiate fire fighting procedures involving at least one cabin crew member and a passenger(s).

7.7.7 Fire/Class B Main deck (Combi configuration)

Each cabin crew member will perform the drills identified in Technical Directive (to be inserted when published).

7.8 Pilot incapacitation drill

7.8.1 Training objective

The cabin crew member will apply the procedures relating to an incapacitated pilot.

7.8.2 Syllabus

(1) Procedures

For each helicopter where the operation of the pilot seats is significantly different, each cabin crew member will –

- (a) pull the pilot away from the flight controls and correctly fasten and lock the restraint system;
- (b) position the pilot seat using the controls, ie. horizontal, vertical, recline; and
- (c) apply flight crew coordination and flight crew communication procedures to assist the remaining cockpit crew.

Notes: 1. Where helicopters have no cabin crew members – as in the case of corporate or charter flights and the pilot/co-pilot is responsible for the safety of passengers, the training standard syllabus has been amended to include two additional columns (PI) and (PR) which refer to “Pilot initial” and “Pilot recurrent”. See table below for a summary of training syllabus.

2. Where an “X” is shown instead of a “.” provision is made for optional or guidance inclusion.

CABIN CREW TRAINING SYLLABUS

PI = Pilot initial, PR = Pilot recurrent, IN = Initial, RC = Recurrent, RQ = Re-qualification, A/C = Aircraft

Training Syllabus Item	PI	PR	IN	RC	RQ	A/C
REGULATORY OVERVIEW						
Regulatory overview			•			
Legislation	•		•	•	•	
AVIATION TERMINOLOGY						
Terminology			•			
Terms of reference			•			
THEORY OF FLIGHT						
General helicopter description			•			
Aerodynamics of flight			•			
Meteorology			•			
Air traffic control			•			
PHYSIOLOGY OF FLIGHT						
General			•	•	•	
Effects of altitude			•	•	•	
COCKPIT OBSERVATION FLIGHT						
General			•	•	•	•
ROLES AND RESPONSIBILITIES - OPERATOR						
Operating requirements			•		•	
Operations manual	•	•	•	•	•	
CABIN CREW MEMBERS						
General	•		•	•	•	
IACM INSPECTORS						
General			•			
SAFETY PROCEDURES						
FLIGHT CREW COORDINATION						
General			•		•	
Crew coordination			•	•	•	•
COMMUNICATIONS						
General			•	•	•	
Communication			•	•	•	
Passenger announcements	•		•			
BRIEFINGS						
Cabin crew briefings			•	•	•	•
Passenger briefings	•	•	•	•	•	•
SAFETY CHECKS						
General	•	•	•	•	•	•
PASSENGER HANDLING						
General			•	•	•	•
Passenger boarding	•	•	•	•	•	•
PASSENGER AND CABIN CREW MEMBER SEATS AND RESTRAINTS						
Passenger seating	•	•	•	•	•	•
Cabin crew seating			•	•	•	•
CABIN BAGGAGE						
Passenger carry-on baggage	•	•	•	•	•	•
Flight crew carry-on baggage			•	•	•	•
ELECTRONIC DEVICES						
General	•	•	•	•	•	•

SERVICE TO PASSENGERS ON THE GROUND						
General			•			
Cabin crew member responsibilities			•	•	•	•
FUELLING WITH PASSENGERS ON BOARD						
General	•	•	•	•		
Cabin crew member responsibilities			•	•	•	•
PRE-TAKE OFF AND PRE-LANDING						
Cabin preparation						
Cabin crew member responsibilities	•		•	•	•	•
Abnormal situations	•		•	•	•	
ROTOR ABNORMALITIES						
General			•	•	•	•
HELIPORT SAFETY						
Hazards on heliports						
Cabin crew member responsibilities						
Helicopter operators						
TURBULENCE						
General			•	•	•	
Cabin crew member responsibilities			•	•	•	
FLIGHT CREW MEMBER INCAPACITATION						
General			•	•	•	
Pilot incapacitation			•	•	•	•
Cabin crew incapacitation			•	•	•	•
COCKPIT PROTOCOL						
General	•		•	•	•	•
FUEL DUMPING						
General			•		•	
POST-FLIGHT DUTIES						
Documentation			•	•	•	•
Communication			•	•		•
OXYGEN ADMINISTRATION						
General			•	•	•	•
Procedures			•	•	•	•
EMERGENCY PROCEDURES - FIRE FIGHTING						
General	•	•	•	•	•	•
Cabin crew member responsibilities	•	•	•	•	•	•
Procedures – cabin	•		•	•	•	•
Procedures – external	•		•	•	•	•
SMOKE/FUMES IN THE CABIN						
General	•	•	•	•	•	•
Cabin crew member responsibilities	•	•	•	•	•	•
RAPID DECOMPRESSIONS AND PRESSURIZATION PROBLEMS						
General	•	•	•	•	•	
Cabin crew member responsibilities	•	•	•	•	•	•
EVACUATIONS						
General	•	•	•	•	•	•
Cabin crew member responsibilities	•	•	•	•	•	•
Evacuation procedures	•	•	•	•	•	•
Post-evacuation	•	•	•	•	•	•
Accident/Incident review			•	•	•	

EMERGENCY EQUIPMENT - EQUIPMENT OVERVIEW						
General			•		•	
HELICOPTER SPECIFIC - PHYSICAL DESCRIPTION						
General			•			
Exterior description			•			
Interior description			•	•		
GALLEYS						
General			•	•		
COMMUNICATION SYSTEMS						
General			•	•		
Interphone			•	•		
Public address system			•	•	•	•
Passenger call system			•	•		
Entertainment system			•	•		•
Automatic announcement system			•	•		
LIGHTING SYSTEMS						
General			•	•		•
WATER AND WASTE SYSTEMS						
General			•	•		•
OXYGEN SYSTEMS						
General			•	•		•
HEATING AND VENTILATION SYSTEMS						
General			•	•		•
EXITS						
General			•	•	•	•
Normal operation			•	•	•	•
Abnormal operation			•	•	•	•
Emergency operation			•	•	•	•
Airstairs			•		•	
UNIQUE FEATURES						
General			•	•	•	
PUBLIC ADDRESS SYSTEM AND INTERPHONE SYSTEM						
Introduction			•	•	•	
Equipment criteria			•	•	•	
Performance criteria			•	•	•	
Evaluation criteria			•	•	•	
PASSENGER BRIEFING DRILL						
Equipment criteria			•	•	•	
Performance criteria			•	•	•	
Evaluation criteria			•	•	•	
HELICOPTER EXIT OPERATION DRILLS						
Equipment criteria	•		•	•	•	
Normal door operation performance criteria			•	•	•	•
Emergency door operation performance criteria			•	•	•	•
Cabin window exit operation			•	•	•	
Evaluation criteria			•	•	•	
Airstair operation performance criteria			•	•	•	•
EVACUATION DRILLS						
General			•	•	•	•
Simulation scenarios			•	•	•	•

Unprepared land/unprepared water evacuation			•	•	•	
Evaluation criteria			•	•	•	
Cabin crew prepared land/ditching evacuation drills			•	•	•	
Evacuation criteria			•	•	•	
RAFT DRILL (WET OR DRY)						
Equipment criteria	X		•	•	•	
Performance criteria	X		•	•	•	
LIFE JACKET DRILL						
Equipment criteria	•		•	•	•	
Performance criteria	•		•	•	•	
HELICOPTER SLIDE DRILL						
Equipment criteria			•	•	•	
Performance criteria			•	•	•	•
FIRE FIGHTING DRILLS						
General	•		•	•	•	
Equipment criteria	•		•	•	•	
Live fire fighting performance criteria	•		•	•	•	
Cabin fire fighting drill performance criteria	•		•	•	•	•
Evaluation criteria	•		•	•	•	•
Equipment practice performance criteria	•		•	•	•	
Fires/Class B main deck cargo compartment	X	X	•	•	•	
OXYGEN ADMINISTRATION DRILL						
Equipment criteria			•	•		
Portable oxygen bottle performance criteria	X	X	•	•		
Fixed first aid oxygen performance criteria	X	X	•	•		
PRE-FLIGHT CHECK						
Equipment criteria	•	•	•	•	•	•
Performance criteria	•	•	•	•	•	•
Evaluation criteria	•	•	•	•	•	•
PRE-TAKE OFF CHECK						
Equipment criteria			•	•	•	•
Performance criteria			•	•	•	•
Evaluation criteria			•	•	•	•
PRE-LANDING CHECK						
Equipment criteria			•	•	•	
Performance criteria			•	•	•	
Evaluation criteria			•	•	•	
POST-LANDING CHECK						
Equipment criteria			•	•	•	
Performance criteria			•	•	•	
Evaluation criteria			•	•	•	
PILOT INCAPACITATION DRILL						
Procedures			•	•	•	

127.03.14 REFRESHER TRAINING

1. Refresher training

An operator must ensure that refresher training is conducted by suitably qualified persons and, for each cabin crew member, includes at least the following:

- (1) Emergency procedures including pilot incapacitation;
- (2) evacuation procedures including crowd control techniques;
- (3) the operation and actual opening of all normal and emergency exits for passenger evacuation in a helicopter or representative training device;
- (4) demonstration of the operation of all other exits; and
- (5) the location and handling of emergency equipment, including oxygen systems, and the donning of life jackets, portable oxygen and protective breathing equipment.

127.03.15 CHECKING

1. Checking

An operator must ensure that each cabin crew member undergoes checks as follows:

- (1) Initial training –
The subjects referred to in ts 127.03.10;
- (2) Type and differences training –
The subjects listed in TS 127.03.11; and
- (3) Recurrent training –
The subjects listed in TS 127.03.13.

127.04.2 OPERATIONS MANUAL

1. Structure and approval of operations manual

- (1) An operator must ensure that the main structure of the operations manual is as follows:

Part 1: General

This part must comprise all non type-related operational policies, instructions and procedures needed for a safe operation and must comply with all relevant MCARs.

Part 2: Helicopter operating procedures

This part must comprise all type-related instructions and procedures needed for a safe operation. It must take account of the different types of helicopters or variants used by the operator.

Part 3: Route and aerodrome instructions and information

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

Part 4: Training

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

- (2) An operator must ensure that the contents of the operations manual are in accordance with paragraph 2 of this technical standard, and relevant to the area and type of operation.
- (3) Before becoming official operational policy, an operator must ensure that the operations manual has been approved by the Director.

2. Contents Of Operations Manual

2.1 PART 1: GENERAL

2.1.1 Administration and control of operations manual

- (1) Introduction
- (a) A statement that the manual complies with all applicable MCARs and with the terms and conditions of the applicable AIR OPERATOR CERTIFICATE.
 - (b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel.
 - (c) A list and brief description of the various parts, their contents, applicability and use.

- (d) Explanations and definitions of terms and words needed for the use of the manual.
- (2) System of amendment and revision
 - (a) Who is responsible for the issuance and insertion of amendments and revisions.
 - (b) A record of amendments and revisions with insertion dates and effective dates.
 - (c) A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interests of aviation safety.
 - (d) A description of the system for the annotation of pages and their effective dates.
 - (e) A list of effective pages.
 - (f) Annotation of changes (on text pages and, as far as practicable, on charts and diagrams).
 - (g) Temporary revisions.
 - (h) A description of the distribution system for the manuals, amendments and revisions.

2.1.2 Organisation and responsibilities

(1) Organisational structure

A description of the organisational structure including the general organogram and operations department organogram. The organogram must depict the relationship between the Operations Department and the other Departments of the organisation. In particular, the subordination and reporting lines of all Divisions, Departments etc, which pertain to the safety of flight operations, must be shown.

(2) Nominated postholders

The name of each nominated postholder responsible for flight operations, the maintenance system, flight crew training and ground operations. A description of their functions and responsibilities must be included.

(3) Responsibilities and duties of operations management personnel

A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable MCARs.

(4) Authority, duties and responsibilities of the pilot-in-command

A statement defining the authority, duties and responsibilities of the pilot-in-command.

(5) Duties and responsibilities of flight crew members other than the pilot-in-command.

A statement defining the duties and responsibilities of flight crew members other than the pilot-in-command.

2.1.3 Operational control and supervision

(1) Supervision of the operation by the operator

A description of the system for supervision of the operation by the operator. This must show how the safety of flight operations and the qualifications of personnel are supervised. In particular, the procedures related to the following items must be described:

- (a) Licence and qualification validity;
- (b) competence of operations personnel; and
- (c) control, analysis and storage of records, flight documents, additional information and data.

(2) System of promulgation of additional operational instructions and information

A description of any 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) Accident prevention and flight safety programme

A description of the main aspects of the flight safety programme including –

- (a) programmes to achieve and maintain risk-awareness by all persons involved in flight operations; and
- (b) evaluation of aviation accidents and incidents and the promulgation of related information.

(4) Operational control

A description of the procedures and responsibilities necessary to exercise operational control with respect to flight safety.

2.1.4 Quality control system

(1) Purpose of the Quality System

The quality system should enable the operator to monitor compliance with the MCAR and CATS, the operations manual, the operator's maintenance management policy, and any other standards specified by that operator or the Director to ensure airworthy aircraft and safe operations.

(2) Requirements

- (a) The operator shall establish a quality system and designate a quality manager to give effect to the requirements of paragraph (1) above. Compliance monitoring must include a system of reporting back to the accountable manager, to ensure corrective action as necessary.
- (b) The quality system must include a quality assurance programme that contains procedures, designed to verify that all operations are being conducted in accordance with all applicable requirements, standards, and procedures.
- (c) The quality system and the quality manager must be acceptable to the Director.
- (d) The quality system must be described in relevant documentation.
- (e) Notwithstanding sub-paragraph (a) above, the Director may accept the nomination of two quality managers, one for flight operations and one for maintenance, provided the operator has designated one single quality management unit to ensure that the quality system is applied uniformly throughout the entire operation.

(3) General

In order to show compliance with paragraphs (1) and (2) above, an operator should establish his quality system in accordance with the instructions and information contained in the paragraphs below.

(4) Definitions

The terms, used in the context of this requirement for an operator's quality system, have the following meaning:

(a) Inspection:

An inspection is the act of observing a particular event or action, to ensure that correct procedures and requirements are followed during the accomplishment of that event or action. The primary purpose of an inspection is to verify that established standards are followed during the observed event or action.

(b) Audit:

An audit is a methodical, planned review used to determine how a business is being conducted, and compares the results with how that business should have been conducted according to regulations and established procedures.

(c) Accountable Manager:

The accountable manager is the person, acceptable to the Director, who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to a standard required by the Director, and any additional requirements defined by the operator. The accountable manager is an essential part of the AOC-holder's management organisation. The term 'accountable manager' is intended to mean the Chief Executive Officer / President / Managing Director / Director-General / General Manager, or similar designations, of the operator's organisation, who by virtue of his or her position

has overall responsibility (including financial) for managing the organisation. The accountable manager will have overall responsibility for the AOC-holder's quality system, including the frequency, format and structure of the internal management evaluation activities, as prescribed in sub-paragraph (9)(h) below.

(d) Quality Assurance:

Quality assurance means all those planned and systematic actions necessary to provide adequate confidence that operational and maintenance practices satisfy prescribed requirements.

(e) Quality Manager:

The quality manager is the manager, acceptable to the Director, responsible for the management of the quality system, the monitoring function and for requesting corrective action.

(5) Quality Policy

An operator shall establish a formal, written quality policy statement, constituting a commitment by the accountable manager as to what the quality system is intended to achieve. The quality policy should reflect the achievement and continued compliance with the MCAR, together with any additional standards specified by the operator.

(6) Quality Manager

- (a) The function of the quality manager, to monitor compliance with-, and the adequacy of, procedures required to ensure safe operational practices and airworthy aircraft, as required by the MCAR, may be carried out by more than one person by means of different, but complementary, quality assurance programmes.
- (b) The primary role of the quality manager is to verify, by monitoring activity in the fields of flight operations, maintenance, crew training and ground operations, that the standards required by the Director, and any additional requirements defined by the operator, are being carried out under the supervision of the relevant nominated post holder.
- (c) The quality manager should be responsible for ensuring that the quality assurance programme is properly established, implemented and maintained.
- (d) The quality manager should—
 - (i) be suitably qualified and experienced;
 - (ii) have direct access to the accountable manager;
 - (iii) preferably not be one of the nominated post holders; and
 - (iv) have access to all parts of the operator's and, as necessary, any sub-contractor's organisation. In the case of small/very small operators (see paragraph (10) below), the posts of the accountable manager and the

quality manager may be combined. However, in such event, independent personnel should conduct quality audits.

(7) Quality System

- (a) The operator's quality system should ensure compliance with, and adequacy of operational and maintenance activities requirements, standards, and operational procedures.
- (b) The operator should specify the basic structure of the quality system applicable to the operation.
- (c) The quality system should be structured according to the size and complexity of the operation to be monitored (see also paragraph (11) below).
- (d) As a minimum, the quality system should address the following:
 - (i) The provisions of the MCAR.
 - (ii) The operator's additional standards and operating procedures.
 - (iii) The operator's quality policy.
 - (iv) The operator's organisational structure.
 - (v) Responsibility for the development, establishment and management of the quality system.
 - (vi) Documentation, including manuals, reports, and records.
 - (vii) Quality procedures.
 - (viii) Quality assurance programme.
 - (ix) Schedule of the monitoring process.
 - (x) Audit procedures.
 - (xi) Reporting procedures.
 - (xii) Follow-up and corrective action procedures.
 - (xiii) Recording system.
 - (xiv) The training syllabus.
 - (xv) Document control.

(8) Quality Assurance Programme.

The quality assurance programme should include all planned and systematic actions necessary to provide confidence that all operations and maintenance are conducted in accordance with all applicable requirements, standards, and operational procedures.

When establishing a quality assurance programme, consideration should, at least, be given to the sub-paragraphs (a) to (j) below:

(a) Quality Inspection.

The primary purpose of a quality inspection is to observe a particular event/action/document, etc., in order to verify whether established operational procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved. Typical subject areas for quality inspections are:

- (i) Actual flight operations.
- (ii) Ground de-icing/anti-icing.
- (iii) Flight support services.
- (iv) Load control.
- (v) Maintenance.
- (vi) Technical standards.
- (vii) Training standards

(b) Audit.

- (i) An audit is a systematic and independent comparison of the way in which an operation is being conducted against the way in which the published operational procedures say it should be conducted. Audits should include at least the following quality procedures and processes:

- (Aa) A statement explaining the scope of the audit.
- (Ab) Planning and preparation.
- (Ac) Gathering and recording evidence.
- (Ad) Analysis of the evidence.

- (ii) Techniques which contribute to an effective audit are:

- (Aa) Interviews or discussions with personnel.
- (Ab) A review of published documents.
- (Ac) The examination of an adequate sample of records.
- (Ad) The witnessing of the activities which make up the operation.
- (Ae) The preservation of documents and the recording of observations.

(c) Auditors

- (i) Auditors should preferably not have any day-to-day involvement in the area of the operation and/or maintenance activity which is to be audited. An operator may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities by the use of part-time auditors.
- (ii) An operator whose structure and size does not justify the establishment of full-time auditors may undertake the audit function by the use of part-time personnel from within his own organisation or from an external source under the terms of an agreement acceptable to the Director. In all cases, the operator should develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team.
- (iii) Where external auditors are used, it is essential that any external specialist is familiar with the type of operation or maintenance conducted by the operator.
- (iv) The operator's quality assurance programme should identify the persons within the company who have the experience, responsibility and authority to—
 - (Aa) perform quality inspections and audits as part of ongoing quality assurance;
 - (Ab) identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings;
 - (Ac) initiate or recommend solutions to concerns or findings through designated reporting channels;
 - (Ad) verify the implementation of solutions within specific timescales; and
 - (Ae) report directly to the quality manager.
- (d) Audit Scope.

Operators are required to monitor compliance with the operational procedures they have designed to ensure safe operations, airworthy aircraft, and the serviceability of both operational and safety equipment. In doing, they should as a minimum, and where appropriate, monitor the following:

- (i) The organisation.
- (ii) Plans and company objectives.
- (iii) Operational procedures.
- (iv) Flight safety.
- (v) Operator certification (AOC/Operations Specification).

- (vi) Supervision within the organisation.
- (vii) Aircraft performance.
- (viii) All-weather operations.
- (ix) Communications and navigational equipment and practices.
- (x) Mass, balance and aircraft loading.
- (xi) Instruments and safety equipment.
- (xii) Manuals, logs, and records.
- (xiii) Aircraft maintenance/operations interface.
- (xiv) Use of the MEL.
- (xv) Maintenance programmes and continued airworthiness.
- (xvi) Airworthiness directives management.
- (xvii) Maintenance accomplishment.
- (xviii) Defect deferral.
- (xix) Flight crew.
- (xx) Cabin crew.
- (xxi) Dangerous goods.
- (xxii) Security.
- (xxiii) Training.
- (e) Audit Scheduling.

A quality assurance programme should include a defined audit schedule and a periodic review-cycle, area by area. The schedule should be flexible, and allow unscheduled audits when trends are identified. Follow-up audits should be scheduled when necessary to verify that corrective action was carried out and that it was effective. An operator should establish a schedule of audits to be completed during a specified calendar period. All aspects of the operation should be reviewed within every period of 12 months in accordance with the programme unless an extension to the audit period is accepted as explained below:

- (i) An operator may increase the frequency of audits at his or her discretion but should not decrease the frequency without the agreement of the Director. It is considered unlikely that an interval between audits greater than 24 months would be acceptable.

- (ii) When an operator defines the audit schedule, significant changes to the management, organisation, operation, or technologies should be considered, as well as changes to the regulatory requirements.
- (f) Monitoring.
 - (i) The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby to ensure that defined policy and operational, and maintenance standards are continuously complied with. Monitoring activity is based upon quality inspections, audits, corrective action and follow-up.
 - (ii) The operator should establish and publish a quality procedure to monitor regulatory compliance on a continuing basis. This monitoring activity should be aimed at eliminating the causes of unsatisfactory performance. Any non-compliance identified as a result of monitoring should be communicated to the manager responsible for taking corrective action or, if appropriate, the accountable manager. Such non-compliance should be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.
 - (iii) The quality assurance programme should include procedures to ensure that corrective actions are taken in response to findings. These quality procedures should monitor such actions to verify their effectiveness and having been completed.
 - (iv) Organisational responsibility and accountability for the implementation of corrective action resides with the department cited in the report identifying the finding.
 - (v) The accountable manager will have the ultimate responsibility for resourcing the corrective action and ensuring, through the quality manager, that the corrective action has re-established compliance with the standard required by the Director, and any additional requirements defined by the operator.
- (g) Corrective Action.
 - (i) Subsequent to the quality inspection/audit, the operator should establish:
 - (Aa) the seriousness of any findings and any need for immediate corrective action;
 - (Ab) the origin of the finding;
 - (Ac) which corrective actions are required to ensure that the non-compliance does not recur;
 - (Ad) a schedule for corrective action;
 - (Ae) the identification of individuals or departments responsible for implementing corrective action; and

- (Af) allocation of resources by the accountable manager, where appropriate.
- (ii) The quality manager should—
 - (Aa) verify that corrective action is taken by the manager responsible in response to any finding of non-compliance;
 - (Ab) verify that corrective action includes the elements outlined in paragraph (8)(g)(i) above;
 - (Af) monitor the implementation and completion of corrective action;
 - (Af) provide management with an independent assessment of corrective action, implementation and completion; and
 - (Af) evaluate the effectiveness of corrective action through the follow-up process.
- (h) Management Evaluation.

A management evaluation is a comprehensive, systematic, documented review by the management of the quality system, operational policies and procedures, and should consider the following:

- (i) The results of quality inspections, audits and any other indicators.
- (ii) The overall effectiveness of the management organisation in achieving stated objectives.
- (iii) A management evaluation should identify and correct trends, and prevent, where possible, future non-conformities. Conclusions and recommendations made as a result of an evaluation should be submitted in writing to the responsible manager for action. The responsible manager should be an individual who has the authority to resolve issues and take action.
- (iv) The accountable manager should decide upon the frequency, format, and structure of internal management evaluation activities.

(i) Recording.

The operator should maintain accurate, complete, and readily accessible records documenting the results of the quality assurance programme. Records are essential data to enable an operator to analyse and determine the root causes of non-conformity, so that areas of non-compliance can be identified and addressed. The following records should be retained for a period of at least five years:

- (i) Audit Schedules.
- (ii) Quality Inspection and Audit Reports.

- (iii) Responses to findings.
- (iv) Corrective-action reports.
- (v) Follow-up and closure reports.
- (vi) Management Evaluation Reports.
- (j) Quality Assurance Responsibility for Sub-Contractors.

Operators may decide to sub-contract out certain activities to external agencies for the provision of services related to areas such as:

- (i) Ground de-icing/anti-icing.
- (ii) Maintenance.
- (iii) Ground handling.
- (iv) Flight support (including performance calculations, flight planning, navigation database, and despatch).
- (v) Training.
- (vi) Manual preparation.

The ultimate responsibility for the product or service provided by the sub-contractor always remains with the operator. A written agreement should exist between the operator and the sub-contractor, clearly defining the safety-related services and quality to be provided. The sub-contractor's safety-related activities relevant to the agreement should be included in the operator's quality assurance programme. The operator should ensure that the sub-contractor has the necessary authorisation/approval, when required, and commands the resources and competence to undertake the task. If the operator requires the sub-contractor to conduct an activity that exceeds the sub-contractor's authorisation/approval, the operator is responsible for ensuring that the sub-contractor's quality assurance takes account of such additional requirements.

(9) Quality System Training.

- (a) An operator should establish effective, well-planned, and resourced quality-related briefings for all personnel. Those responsible for managing the quality system should receive training covering—
 - (i) an introduction to the concept of the quality system;
 - (ii) quality management;
 - (iii) the concept of quality assurance;
 - (iv) quality manuals;

- (v) audit techniques;
 - (vi) reporting and recording; and
 - (vii) the way in which the quality system will function in the organisation.
 - (b) Time should be provided to train every individual involved in quality management and for briefing the remainder of the employees. The allocation of time and resources should be governed by the size and complexity of the operation concerned.
 - (c) Quality management courses are available from the various national or international standards institutions, and an operator should consider whether to offer such courses to those likely to be involved in the management of quality systems. Operators with sufficient appropriately qualified staff should consider whether to carry out in-house training.
- (10) Quality System for Organisations with 20 or less Full -Time Employees.
- (a) The requirement to establish and document a quality system and to employ a quality manager applies to all operators. References to large and small operators elsewhere in the requirements are governed by aircraft capacity and by mass. Such terminology is not relevant when considering the scale of an operation and the quality system required. Therefore, in the context of quality systems, operators should be categorised according to the number of full-time employees.
 - (b). Operators who employ five or less full-time staff are considered to be 'very small', while those employing between six and twenty full-time employees are regarded as 'small'.
 - (c) Complex quality systems could be inappropriate for small or very small operators and the clerical effort required to draw up manuals and quality procedures for a complex system may stretch their resources. It is therefore accepted that such operators should tailor their quality systems to suit the size and complexity of their operation and allocate resources accordingly.
 - (d) For small and very small operators it may be appropriate to develop a quality assurance programme that employs a checklist. The checklist should have a supporting schedule that requires completion of all checklist items within a specified timescale, together with a statement acknowledging completion of a periodic review by top management. An occasional independent overview of the checklist content and achievement of the quality assurance should be undertaken.
 - (e) The small operator may decide to use internal or external auditors or a combination of the two. In these circumstances it would be acceptable for external specialists and/or qualified organisations to perform the quality audits on behalf of the quality manager.
 - (f) If the independent quality audit function is being conducted by external auditors, the audit schedule should be shown in the relevant documentation. Whatever arrangements are made, the operator retains the ultimate responsibility for the quality system, and especially the completion and follow-up of corrective actions.

2.1. 5 Flight crew composition

(1) Flight crew composition

An explanation of the method for determining flight crew compositions taking account of the following:

- (a) The type of helicopter being used;
- (b) the area and type of operation being undertaken;
- (c) the phase of the flight;
- (d) the minimum flight crew requirement and flight duty period planned;
- (e) experience (total and on type), recency and qualification of the flight crew members; and
- (f) the designation of the pilot-in-command and, if necessitated by the duration of the flight, the procedures for the relief of the pilot-in-command or other members of the flight crew.

(2) Designation of the pilot-in-command

The rules applicable to the designation of the pilot-in-command.

(3) Flight crew incapacitation

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

2.1.6 Qualification requirements

- (1) A description of the required licence, rating(s), qualification/competency (e.g. for routes and aerodromes), experience, training, checking and recency for operations personnel to conduct their duties. Consideration must be given to the helicopter type, kind of operation and composition of the flight crew.

(2) Flight deck crew

- (a) Pilot-in-command
- (b) Co-pilot
- (c) Pilot under supervision
- (d) Operation on more than one type or variant.

(3) Cabin 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.
- (4) Training, checking and supervision personnel
 - (a) For flight deck crew
 - (b) For cabin crew.
- (5) Other operations personnel.

2.1.7 Flight crew health precautions

(1) Flight crew health precautions

The relevant regulations and guidance to flight crew members concerning health including –

- (a) alcohol and other intoxicating liquor;
- (b) narcotics;
- (c) drugs;
- (d) sleeping tablets;
- (e) pharmaceutical preparations;
- (f) immunisation;
- (g) scuba diving;
- (h) blood donation;
- (i) meal precautions prior to and during flight;
- (j) sleep and rest; and
- (k) surgical operations.

2.1.8 Flight time limitations

(1) Flight time and duty period limitations and rest requirements

A description of the flight time and duty period limitations and rest requirements prescribed in TS 127.02.10 as applicable to the operation.

(2) Exceeded flight time and duty period limitations and/or reductions of rest periods

Conditions under which flight time and duty periods may be exceeded or rest periods may be reduced and the procedures used to report these modifications.

2.1.9 Operating procedures

(1) Flight preparation instructions

As applicable to the operation:

(a) Minimum flight altitudes

A description of the method of determination and application of minimum 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) Criteria for determining the usability of aerodromes

(c) Methods for the determination of aerodrome operating minima pursuant to MCAR 127.07.7 and TS 127.07.7. 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 the pilots, the reported visibility and the reported runway visual range.

(d) En route operating minima for VFR flights or VFR portions of a flight and, where single-engine helicopters are used, instructions for route selection with respect to the availability of surfaces which permit a safe forced landing.

(e) Presentation and application of aerodrome and en route operating minima

(f) Interpretation of meteorological information

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

(g) Determination of the quantities of fuel, oil and water methanol carried

The methods by which the quantities of fuel, oil and water methanol to be carried, are determined and monitored in flight. This section must also include instructions on the measurement and distribution of the fluid carried on board. Such instructions must take account of all circumstances likely to be encountered on the flight, including the possibility of in-flight replanning and of failure of one or more of the helicopter's power plants. The system for maintaining fuel and oil records must also be described.

(h) Mass and centre of gravity

The general principles of mass and centre of gravity including:

- (i) Definitions;

- (ii) methods, procedures and responsibilities for preparation and acceptance of mass and centre of gravity calculations;
- (iii) the policy for using either standard and/or actual masses;
- (iv) the method for determining the applicable passenger, baggage and cargo mass;
- (v) the applicable passenger and baggage masses for various types of operations and helicopter type;
- (vi) general instruction and information necessary for verification of the various types of mass and balance documentation in use;
- (vii) last minute changes procedures;
- (viii) specific gravity of fuel, oil and water methanol; and
- (ix) seating policy/procedures.

(i) ATS flight plan

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

(j) Operational flight plan

Procedures and responsibilities for the preparation and acceptance of the operational flight plan. The use of the operational flight plan must be described including samples of the operational flight plan formats in use.

(k) Operator's flight folio

The responsibilities and the use of the operator's flight folio must be described, including samples of the format used. A technical log may be used in place of a flight folio, if it contains the required information.

(l) List of documents, forms and additional information to be carried.

(2) Ground handling instructions

(a) Fuelling procedures

A description of fuelling procedures, including –

- (i) safety precautions during refuelling and defuelling including when an APU is in operation or when a turbine engine is running and the prop-brakes are on;
- (ii) refuelling and defuelling when passengers are embarking, on board or disembarking ; and

(iii) precautions to be taken to avoid mixing fuels.

(b) Helicopter, passengers and cargo handling procedures related to safety

A description of the handling procedures to be used when allocating seats and embarking and disembarking passengers and when loading and unloading the helicopter. Further procedures, aimed at achieving safety whilst the helicopter is on the apron, must also be given. Handling procedures must include –

- (i) disembarking of persons;
- (ii) sick passengers and persons with reduced mobility;
- (iii) transportation of inadmissible passengers, deportees or persons in custody;
- (iv) permissible size and weight of hand baggage;
- (v) loading and securing of items in the helicopter;
- (vi) special loads and classification of load compartments;
- (vii) positioning of ground equipment;
- (viii) operation of helicopter doors;
- (ix) safety on the apron, including fire prevention, blast and suction areas;
- (x) start-up, ramp departure and arrival procedures;
- (xi) servicing of helicopters;
- (xii) documents and forms for helicopter handling; and
- (xiii) multiple occupancy of helicopter seats.

(c) Procedures for the refusal of embarkation and for disembarkation

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, except medical patients under proper care, are refused embarkation.

(d) De-icing and anti-icing on the ground

A description of the de-icing and anti-icing policy and procedures for helicopters on the ground. These must include descriptions of the types and effects of icing and other contaminants on helicopters 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 helicopter performance;
- (iv) hold-over times; and
- (v) precautions during usage.

(3) Flight procedures

(a) VFR/IFR policy

A description of the policy for allowing flights to be made under VFR, or of requiring flights to be made under IFR, or of changing from one to the other.

(b) Navigation procedures

A description of all navigation procedures relevant to the type(s) and area(s) of operation. Consideration must be given to –

- (i) standard navigation procedures including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the helicopter;
- (ii) POLAR navigation and navigation in other designated areas;
- (iii) RNAV;
- (iv) in-flight replanning; and
- (v) procedures in the event of system degradation.

(c) Altimeter setting procedures

(d) Altitude alerting system procedures

(e) Ground proximity warning system procedures

(f) Policy and procedures for the use of TCAS/ACAS

(g) Policy and procedures for in-flight fuel management

(h) Adverse and potentially hazardous atmospheric conditions

Procedures for operating in, and/or avoiding, potentially hazardous atmospheric conditions including –

- (i) thunderstorms;
- (ii) icing conditions;
- (iii) turbulence;

- (iv) windshear;
 - (v) jetstream;
 - (vi) volcanic ash clouds;
 - (vii) heavy precipitation;
 - (viii) sand storms;
 - (ix) mountain waves; and
 - (x) significant temperature inversions.
- (i) Wake turbulence
- Wake turbulence separation criteria, taking into account helicopter types, wind conditions and runway location.
- (j) Flight crew members at their stations
- The requirements for flight crew members to occupy their assigned stations or seats during the different phases of flight or whenever deemed necessary in the interests of aviation safety.
- (k) Use of safety belts for flight crew and passengers
- The requirements for flight crew members and passengers to use safety belts and/or harnesses during the different phases of flight or whenever deemed necessary in the interests of aviation safety.
- (l) Admission to flight deck
- The conditions for the admission to the flight deck of persons other than the flight crew.
- (m) Use of vacant flight crew seats
- The conditions and procedures for the use of vacant flight crew seats.
- (n) Incapacitation of flight crew members
- Procedures to be followed in the event of incapacitation of flight crew members in flight. Examples of the types of incapacitation and the means for recognising them, must be included.
- (o) Cabin safety requirements, Procedures covering:
- (i) Cabin preparation for flight, in-flight requirements and preparation for landing including procedures for securing cabin and galleys;

- (ii) 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 helicopter;
 - (iii) procedures to be followed during passenger embarkation and disembarkation;
 - (iv) procedures in the event of fuelling with passengers on board or embarking and disembarking; and
 - (v) smoking on board.
- (p) Passenger briefing procedures

The contents, means and timing of passenger briefing in accordance with MCAR 91.07.19.
- (q) Procedures for helicopters operated whenever required cosmic or solar radiation detection equipment is carried.
- (r) Procedures for the use of cosmic or solar radiation detection equipment and for recording its readings including actions to be taken in the event that limit values specified in the operations manual are exceeded. In addition, the procedures, including ATS procedures, to be followed in the event that a decision to descend or re-route is taken.
- (4) All weather operations
- (5) Use of the minimum equipment and configuration deviation list(s)
- (6) Use of the minimum equipment and configuration deviation list(s)
- (7) Non-revenue flights

Procedures and limitations for –

 - (a) training flights;
 - (b) test flights;
 - (c) delivery flights;
 - (d) demonstration flights; and
 - (e) positioning flights, including the kind of persons who may be carried on such flights.
- (8) Oxygen requirements
 - (a) An explanation of the conditions under which oxygen must be provided and used.
 - (b) The oxygen requirements specified for –

- (i) flight deck crew;
- (ii) cabin crew; and
- (iii) passengers.

2.1.10 Dangerous goods and weapons

- (1) Information, instructions and general guidance on the conveyance of dangerous goods including:
 - (a) operator's policy on the conveyance of dangerous goods;
 - (b) guidance on the requirements for acceptance, labelling, handling, stowage and segregation of dangerous goods;
 - (c) procedures for responding to emergency situations involving dangerous goods;
 - (d) duties of all personnel involved as referred to in a Part 92; and
 - (e) instructions on the carriage of the operator's employees.
- (2) The conditions under which weapons, munitions of war and sporting weapons may be carried.

2.1.11 Security

- (1) Security instructions and guidance of a non-confidential nature which must include the authority and responsibilities of operations personnel. Policies and procedures for handling and reporting crime on board such as unlawful interference, sabotage, bomb threats, and hijacking must also be included.
- (2) A description of preventative security measures and training.

Note: Parts of the security instructions and guidance may be kept confidential.

2.1.12 Handling of aviation accidents and incidents

Procedures for the handling, notifying and reporting of aviation accidents and incidents. This section must include –

- (1) definitions of aviation accidents and incidents and the relevant responsibilities of all persons involved;
- (2) the description of which operator departments, authorities or other institutions have to be notified by which means and in which sequence in case of an aviation accident;
- (3) special notification requirements in the event of an aviation accident or incident when dangerous goods are being carried;
- (4) a description of the requirements to report specific aviation accidents and incidents;

- (5) the forms used for reporting and the procedure for submitting them to the relevant authority must also be included; and
- (6) if the operator develops additional safety related reporting procedures for its own internal use, a description of the applicability and related forms to be used.

2.1.13 Rules of the air

Rules of the air including –

- (1) visual and instrument flight rules;
- (2) territorial application of the rules of the air;
- (3) communication procedures including COM-failure procedures;
- (4) information and instructions relating to the interception of civil helicopters;
- (5) the circumstances in which a radio listening watch is to be maintained;
- (6) signals;
- (7) time system used in operation;
- (8) ATC clearances, adherence to flight plan and position reports;
- (9) visual signals used to warn an unauthorised helicopter flying in or about to enter a restricted, prohibited or danger area;
- (10) procedures for pilots observing an aviation accident or receiving a distress transmission;
- (11) the ground/air visual codes for use by survivors, description and use of signal aids; and
- (12) distress and urgency signals.

2.2 PART 2: HELICOPTER OPERATING MATTERS – TYPE RELATED

Taking account of the differences between types, and variants of types, under the following headings:

2.2.1 General information and units of measurement

General information (e.g. helicopter dimensions), including a description of the units of measurement used for the operation of the helicopter type concerned and conversion tables.

2.2.2 Limitations

A description of the certified limitations and the applicable operational limitations including –

- (1) certification status;

- (2) passenger seating configuration for each helicopter type including a pictorial presentation; conditions, etc);
- (4) flight crew composition;
- (5) mass and centre of gravity;
- (6) speed limitations;
- (7) flight envelope(s);
- (8) wind limits including operations on contaminated runways;
- (9) performance limitations for applicable configurations;
- (10) runway slope;
- (11) limitations on wet or contaminated runways;
- (12) airframe contamination; and
- (13) system limitations.

2.2.3 Normal procedures

The normal procedures and duties assigned to the flight crew, the appropriate check-lists, the system for use of the check-lists and a statement covering the necessary coordination procedures between flight deck crew and cabin crew. The following normal procedures and duties must be included:

- (1) Pre-flight;
- (2) pre-departure;
- (3) altimeter setting and checking;
- (4) taxi, take-off and climb;
- (5) noise abatement;
- (6) cruise and descent;
- (7) approach, landing preparation and briefing;
- (8) VFR approach;
- (9) instrument approach;
- (10) visual approach and circling;
- (11) missed approach;
- (12) normal landing;

- (13) post landing; and
- (14) operation on wet and contaminated runways.

2.2.4 Abnormal and emergency procedures

The abnormal and emergency procedures and duties assigned to the flight 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 cabin crew. The following abnormal and emergency procedures and duties must be included:

- (1) Flight crew incapacitation;
- (2) fire and smoke drills;
- (3) exceeding structural limits such as overweight landing;
- (4) lightning strikes;
- (5) distress communications and alerting ATC to emergencies;
- (6) engine failure;
- (7) system failures;
- (8) guidance for diversion in case of serious technical failure;
- (9) ground proximity warning;
- (10) TCAS warning;
- (11) windshear; and
- (12) emergency landing/ditching.

2.2.5 Performance

- (1) Performance data must be provided in a form in which it can be used without difficulty.
- (2) 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.

- (3) If performance data, as required for the appropriate performance class, is not available in the approved AFM, then other data acceptable to the Commissioner must be included. Alternatively, the operations manual may contain cross-reference to the approved data contained in the AFM where such data is not likely to be used often or in an emergency.
- (4) Additional performance data

(a) Effect of equipment on level flight (fuel consumption, speed and range):

- (i) Hoist installation;
- (ii) sliding doors – open; and closed;
- (iii) ski installation;
- (iv) float installation;
- (v) emergency float installation; and
- (vi) sand filter installation;

(b) flights conducted under the provisions of the CDL.

2.2.6 Flight planning

- (1) Data and instructions necessary for pre-flight and in-flight planning including factors such as speed schedules and power settings. Where applicable, procedures for engine(s)-out operations. ETOPS and flights to isolated aerodromes must be included.
- (2) The method for calculating fuel needed for the various stages of flight in accordance with TS 127.07.10.

2.2.7 Mass and balance

Instructions and data for the calculation of the mass and balance including –

- (1) calculation system (e.g. index system);
- (2) information and instructions for completion of mass and balance documentation, including manual and computer generated types;
- (3) limiting masses and centre of gravity of the various versions; and
- (4) dry operating mass and corresponding centre of gravity or index.

2.2.8 Loading

Procedures and provisions for loading and securing the load in the helicopter.

2.2.9 Configuration deviation list

The Configuration Deviation List(s) (CDL), if provided by the manufacturer, taking account of the helicopter types and variants operated including procedures to be followed when an helicopter is being despatched under the terms of its CDL.

2.2.10 Minimum equipment list

The Minimum Equipment List (MEL) taking account of the helicopter types and variants operated and the type(s)/area(s) of operation.

2.2.11 Survival and emergency equipment including oxygen

- (1) A list of the survival 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 lists(s) must also be included.
- (2) 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.

2.2.12 Emergency evacuation procedures

- (1) Instructions for preparation for emergency evacuation including flight crew coordination and emergency station assignment.
- (2) Emergency evacuation procedures

A description of the duties of all members of the flight crew for the rapid evacuation of An helicopter and the handling of the passengers in the event of a forced landing, ditching or other emergency.

2.2.13 Helicopter systems

A description of the helicopter systems, related controls and indications and operating instructions.

2.3 PART 3: ROUTE AND HELIPORT INSTRUCTIONS AND INFORMATION

Instructions and information relating to communications, navigation and aerodromes including minimum flight levels and altitudes for each route to be flown and operating minima for each aerodrome planned to be used, including –

- (1) minimum flight level/altitude;
- (2) operating minima for departure, destination and alternate aerodromes;
- (3) communication facilities and navigation aids;
- (4) runway data and aerodrome facilities;
- (5) approach, missed approach and departure procedures including noise abatement procedures;
- (6) COM-failure procedures;
- (7) search and rescue facilities in the area over which the helicopter is to be flown;
- (8) 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;
- (9) availability of aeronautical information and MET services;

- (10) en route COM/NAV procedures including holding; and
- (11) aerodrome/heliport categorisation for flight crew competence qualification.

2.4 PART 4: TRAINING

- (1) Training syllabus and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight.
- (2) Training syllabus and checking programmes must include:
 - (a) For flight deck crew
All relevant items prescribed in Parts 61 and 63 and Subpart 3 of Part 127;
 - (b) For cabin crew
All relevant items prescribed in TS 127.03.10;
 - (c) For operations personnel concerned, including flight crew members:
 - (i) All relevant items prescribed in Part 92; and
 - (ii) All relevant items regarding operator security.
 - (d) For operations personnel other than flight crew members (e.g. dispatcher, handling personnel etc.) All other relevant items pertaining to their duties.
- (3) Procedures
 - (a) Procedures for training and checking.
 - (b) Procedures to be applied in the event that personnel do not achieve or maintain the required standards.
 - (c) Procedures to ensure that abnormal or emergency situations requiring the application of part or all of abnormal or emergency procedures and simulation of IMC by artificial means, are not simulated during commercial flights.
- (4) Description of documentation to be stored and storage periods.

127.04.4 RECORDS OF EMERGENCY AND SURVIVAL EQUIPMENT

1. Emergency and survival equipment list

The minimum information to be contained in an emergency and survival equipment list, is prescribed in MCAR 91.01.5.

127.04.6 LOAD AND TRIM SHEET

1. Load and trim sheet

- (1) The load and trim sheet must contain the following information:
 - (a) The helicopter registration and type;
 - (b) the flight identification number and date;
 - (c) the identity of the pilot-in-command;
 - (d) the identity of the person who prepared the document;
 - (e) the dry operating mass and the corresponding CG of the helicopter;
 - (f) the mass of the fuel at take-off and the mass of trip fuel;
 - (g) the mass of consumables other than fuel;
 - (h) the components of the load including passengers, baggage, freight and ballast;
 - (i) the take-off mass, landing mass and zero fuel mass;
 - (j) the load distribution;
 - (k) the applicable helicopter CG positions; and
 - (l) the limiting mass and CG values.
- (2) The person superintending the loading of an helicopter must certify that the load distribution is in accordance with the requirements prescribed in the operations manual or flight manual and that the maximum certificated mass has not been exceeded.
- (3) The load and trim sheet must be signed by the pilot-in-command unless the load and trim sheet is sent to the helicopter by electronic data transfer.
- (4) Electronic data transfer

When the load and trim sheet is sent to the helicopter by electronic data transfer, a copy of the final load and trim sheet, as accepted by the pilot-in-command, must be available on the ground.

127.06.2 APPLICATION FOR AIR OPERATOR CERTIFICATE AND OPERATIONS SPECIFICATION

1. Application for Air Operator Certificate

The process and format for the application for an Air Operator Certificate is described in detail in the document, Air Operator Certification Manual. All applications for the issue of an Air Operator Certificate or revision thereto, shall be in accordance with the procedures lay down in the manual and supported with the applications forms published therein as applicable to the particular application. Sample AOC application forms are published in Annex C.

127.06.3 ADJUDICATION OF APPLICATION FOR AN AIR OPERATOR CERTIFICATE

The form, in which an air operator certificate is issued, is contained in Annex B.

127.06.6 COMPLIANCE WITH AN AIR OPERATOR CERTIFICATE

1. Notification

Before change is effected to an AIR OPERATOR CERTIFICATE, the holder of the AIR OPERATOR CERTIFICATE must notify the Director in the manner prescribed in the Air Operator Certification Manual. The IACM will advise of what certifying actions may be required prior to such changes taking place and where applicable, new authorities issued.

127.07.7 HELIPORT OPERATING MINIMA

1. Take-off minima**(1) General**

- (a) Take-off minima established by the operator must be expressed as visibility or RVR limits, taking into account all relevant factors for each aerodrome planned to be used and the helicopter characteristics. Where there is a specific need to see and avoid obstacles on departure and/or for a forced landing, additional conditions (e.g. ceiling) must be specified.
- (b) Subject to subsection (4) of this TS, the pilot-in-command may not commence take-off unless the weather conditions at the aerodrome of departure are equal to or better than applicable minima for landing at that aerodrome.
- (c) When the reported meteorological visibility is below that required for take-off and RVR is not reported, a take-off may only be commenced if the pilot-in-command can determine that the RVR/visibility along the take-off runway is equal to or better than the required minimum.
- (d) When no reported meteorological visibility or RVR is available, a take-off may only be commenced if the pilot-in-command can determine that the RVR/visibility along the take-off runway is equal to or better than the required minimum.

(2) Visual reference

The take-off minima must be selected to ensure sufficient guidance to control the helicopter in the event of both a discontinued take-off in adverse circumstances and a continued take-off after failure of the critical power unit.

(3) Required RVR/Visibility

- (a) For multi-engine helicopters, whose performance is such that, in the event of a critical power unit failure at any point during take-off, the helicopter can either stop or continue the take-off to a height of 500 meters above the aerodrome while clearing obstacles by the required margins, the take-off minima established by an operator must be expressed as RVR/Visibility values not lower than those approved for the AOC holder.

(4) Take-Off in Weather Above Take-off Minima but Below Landing Limits

The standard for authorization to conduct a take-off in IMC when weather conditions are above take-off, but below landing minima for the runway in use are:

- (a) the helicopter must be multi-engine;
- (b) an alternate aerodrome is specified in the IFR flight plan; and

- (c) that alternate aerodrome is located within the distance of the take-off aerodrome, which can be flown in 60 minutes at the normal cruising speed.
- (5) Weather Below Published Take-off Minima
- (a) The Company Operations Manual shall contain detailed guidance on how to determine departure one engine inoperative climb gradient and obstacle clearance.
 - (b) The take-off runway is equipped with:
 - (i) serviceable and functioning high intensity runway lights, runway centre line lights and centre line markings that are plainly visible to the pilot throughout the take-off; and
 - (ii) at least one transmissometer, situated at either the approach end or mid point of the take-off runway with a reading of not less than RVR 200 meters.
 - (c) The pilot-in-command is satisfied that the required RVR 200 meters visibility exists for the take-off runway and visual reference to the runway can be maintained at least until V_{toss} (take-off safety speed) and V_{mini} (instrument flight minimum speed) have been attained.
 - (d) The pilot-in-command and second-in-command attitude (artificial horizon) instruments incorporate pitch attitude index lines in appropriate increments above and below the zero pitch reference to at least 15 degrees and incorporate operative failure warning systems which will immediately detect essential instrument malfunction or failure.
 - (e) The pilot-in-command, and the second-in-command if authorized by the air operator for RVR 200 meters take-off, shall have been checked conducting RVR 200 meters take-offs and rejected take-offs by an approved company check pilot or an IACM Inspector within the preceding 12 months in a synthetic flight training device capable of visually depicting RVR 200 meters. The RVR 200 meters take-off certification shall be entered into the pilot's training and checking records.
- (6) No Alternate Aerodrome - IFR Flight

The helicopter standard for authority to conduct an IFR flight when an alternate aerodrome has not been designated in the IFR flight plan is as follows:

- (a) the Company Operations Manual shall contain guidance on the execution of no alternate IFR flights and the flight is operated under the Operational Control System approved by the Director;
- (b) flight following personnel are to be aware that the flight is operating no alternate IFR and shall have current weather readily accessible for timely communication to the flight;
- (c) pilots-in-command are to be familiar with diversionary aerodromes;

- (d) terminal forecasts and weather reports shall be available for the destination and shall indicate that, at the estimated time of arrival and for one (1) hour after the estimated time of arrival, there will be:
 - (i) a ceiling of at least 500 meters above the airport elevation, or at least 200 meters above the lowest applicable approach minima, whichever is higher, and a visibility of at least two (2) miles.

2. Landing minima

The following are the standards for operations specifications which may be issued pursuant to this section:

- (1) Non-Precision Approach minima
 - (a) The standard for authorization to use the Non-Precision Instrument Approach Procedure is:
 - (i) the helicopter is certificated as a Transport Category A helicopter and operated by a pilot-in-command and a second-in-command two pilot flight crew;
 - (ii) the helicopter shall be equipped with:
 - (A) weather radar incorporating a beacon receiver mode and one ADF;
 - (B) two independent VHF air ground communication systems;
 - (C) two radio altimeter indicators with altitude alert function; and
 - (D) rain protection for each windshield and a heat source for each airspeed system pitot tube;
 - (iii) the aerodrome shall be equipped with:
 - (A) ground/air communications equipment capable of providing essential approach and landing information;
 - (B) facilities to provide essential information related to altimeter setting, observed weather, wind speed and direction, aerodrome condition and, if applicable, pitch and roll of the deck; and
 - (C) at least one non-directional beacon (NDB);
 - (iv) flight crew member qualifications;
 - (A) before pilots may conduct approaches to a minimum descent altitude to 150 feet they shall have demonstrated, within the proceeding 12 months, to an IACM Inspector, or a Company Check Pilot their proficiency conducting NDB approaches to 150 feet MDA. The check may be conducted in an approved synthetic flight training device provided the air operator is approved to use the FTD for pilot training. NDB certification shall be annotated on the Pilot Check Report; and

- (B) pilots-in-command having less than 100 hours pilot-in-command experience on the helicopter type or not currently holding NDB certification are restricted to NDB 250 feet MDA;
 - (v) approach beyond the Final Approach Fix when visibility is reported at less than 1/4 statute mile is prohibited.
- (2) Precision approach – Category I ILS

The standards for authorization to use ILS approach minima to 100 feet DH and reported RVR of not less than 1,200 feet on a Category I Instrument Landing System (ILS) are:

 - (i) the helicopter is certificated as Transport Category A rotorcraft, and operated by a pilot-in-command and second-in-command, two-pilot flight crew;
 - (ii) the approach is a Category I ILS procedure as published in the *approach manual approved for the operator's use*, including medium or high intensity approach lighting and a transmissometer at either the approach and/or mid point of the runway;
 - (iii) both the pilot-in-command (PIC) and the second-in-command (SIC) have at least 100 hours on type of rotorcraft flown;
 - (iv) the air operator has developed an acceptable program and has received authorization to conduct training and checks in an approved synthetic flight training device (FTD);
 - (v) the PIC and the SIC shall be checked within the previous 12 months in an approved FTD by an approved check pilot or IACM Inspector and shall be certified as competent to use these minima;
 - (vi) the helicopter shall be established in a stabilized approach and shall be flown at an indicated airspeed not exceeding 80 knots from the final approach fix (FAF) inbound;
 - (vii) the helicopter shall be equipped with the following serviceable and functioning systems:
 - (A) a flight director or single automatic approach coupler augmenting the stabilization system;
 - (B) two radio altimeter indicators having an altitude alert function which do not interfere with the normal operation and display of the radio altimeter system;
 - (C) ice and rain protection for each windshield and a heat source for each airspeed system pitot tube installed;
 - (D) two independent VHF air-ground communications systems; and

- (E) dual ILS localizer and glide slope receivers and associated avionics failure warning systems;
 - (viii) the air operator shall provide training to flight crew members in accordance with the operator's training program approved by the Director,
 - (ix) for the purposes of crew certification, a successful approach is defined as one in which, at the DH:
 - (A) the helicopter is in trim for continuation of a normal approach and landing;
 - (B) the indicated airspeed, heading and threshold height are satisfactory for a normal transition to an in-ground effect hover or run-on landing without an abnormally large flare such as would cause a gain in altitude and/or a loss of required visual reference;
 - (C) the aircraft is positioned and tracking to remain within the lateral confines of the runway extended;
 - (D) deviation from the glide path does not exceed one dot, as displayed on the ILS indicator; and
 - (E) no unusual roughness or excessive attitude changes have occurred after leaving the final approach fix (FAF);
 - (x) for the purposes of crew certification:
 - (A) the proficiency check (initial and recurrent) will be conducted by an approved company check pilot or by an IACM Inspector. The company check pilot must receive lower limits training and be monitored initially in the FTD by an IACM Inspector, prior to conducting lower limits checks on company personnel;
 - (B) the crew will consist of a pilot-in-command and a second-in-command and the company check pilot or the Transport Canada Inspector will not form part of the crew;
 - (C) the proficiency check (initial and recurrent) for each flight crew member shall include at least one RVR 1200 feet/DH 100 feet approach to a missed approach during which a practical emergency (e.g. engine fire) is introduced to assess crew coordination, plus a subsequent RVR 1200 feet/DH 100 feet ILS approach to a landing; and
 - (D) the lower limits certification shall be annotated on the Pilot Check Report and a copy shall be retained by the air operator in the respective pilot file.
- (3) Aerodrome Operating Minima Visual Approach

An operator may not use an RVR of less than 1 500 m for a visual approach.

127.07.10 FUEL POLICY

1. Contingency fuel

At the planning stage, not all factors which could have an influence on the fuel consumption to the destination aerodrome can be foreseen. Therefore, contingency fuel is carried to compensate for items such as –

- (1) deviations of an individual helicopter from the expected fuel consumption data;
- (2) deviations from forecast meteorological conditions; and
- (3) deviations from planned routings and/or cruising levels/altitudes.

127.07.18 CARRY-ON BAGGAGE

1. Procedures for stowing of carry-on baggage

Procedures established by an operator to ensure that carry-on baggage is adequately and securely stowed shall take account of the following:

- (1) Each item carried in a cabin must be stowed only in a location that is capable of restraining it;
- (2) Mass limitations placarded on or adjacent to stowages shall not be exceeded;
- (3) Underseat stowages shall not be used unless the seat is equipped with a restraint bar and the baggage is of such size that it may adequately be restrained by this equipment;
- (4) Items shall not be stowed in toilets or against bulkheads that are incapable of restraining articles against movement forwards, sideways or upwards and unless the bulkheads carry a placard specifying the greatest mass that may be placed there;
- (5) Baggage and cargo placed in lockers shall not be of such size that they prevent latched doors from being closed securely;
- (6) Baggage and cargo shall not be placed where it will impede access to emergency equipment; and
- (7) Checks shall be made before take-off, before landing, and whenever the pilot-in-command illuminates the fasten seat belts sign (or otherwise so orders) to ensure that baggage is stowed where it cannot impede evacuation from the aircraft or cause injury by falling (or other movement) as may be appropriate to the phase of flight.
- (8) All baggage which is required to be brought into the cabin area shall be:
 - (a) of a size as controlled by the operator but shall not exceed 115cm (56cm + 36cm + 23cm);
 - (b) of a weight as controlled by the operator but shall not exceed 7kg per item;
 - (c) of an amount as controlled by the operator but shall not exceed one bag per economy class seat or two bags per first or business class seat.

Note: This standard is applicable to all aircraft operated domestically in terms of Part 127 and to all Mozambique registered aircraft operated internationally in terms of Part 127. See MCAR 127.01.1.

- (9) An operator may request an exemption of the above requirements as per the requirements of MCAR Part 11.

127.07.34 CERTIFIED EXTERNAL LOAD OPERATIONS

1. Helicopter External Cargo Loads Operating Rules

- (1) Each air operator authorized in its operations specifications to carry external loads by a helicopter shall perform such operations in accordance with the rules laid down in this TS.
 - (a) Upon making an application for an operations specification authorizing the carriage of external loads in a helicopter, an air operator must demonstrate to the Director, the ability to perform the operational flight checks prescribed in Subsections (3) (a), (b) and (c) of this section as applicable.
- (2) The rotorcraft/load combination must demonstrate satisfactory flight characteristics, unless these operational flight checks have been demonstrated previously and the rotorcraft/load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external load weight (including the external load attaching means) is the maximum weight for which authorization is requested, and the proposed operation meets all the applicable sections of this Part.
- (3) Operational Checks required to satisfy section (1)(a) above are:
 - (a) Class A rotorcraft/load combinations: The operational flight check must consist of at least the following maneuvers:
 - (i) Takeoff and landing
 - (ii) Demonstration of adequate directional control while hovering
 - (iii) Acceleration from a hover
 - (iv) Horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested.
 - (b) Class B and D rotorcraft/load combinations: The operational flight check must consist of at least the following maneuvers:
 - (i) Pickup of the external load
 - (ii) Demonstration of adequate directional control while hovering
 - (iii) Acceleration from a hover
 - (iv) Horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested
 - (v) Demonstrating appropriate lifting device operation

- (vi) Maneuvering of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick release controls installed on the rotorcraft
- (c) Class C rotorcraft/load combinations: For Class C rotorcraft/load combinations used in wire stringing, cable laying, or similar operations, the operational flight check must consist of the maneuvers, as applicable, prescribed in paragraph (c) of this section.

2. Emergency Provisions With External Loads

- (1) In an emergency involving the safety of persons or property, the air operator may deviate from the rules of this part to the extent required to meet that emergency.
- (2) Each person who deviates from a rule pursuant to Subsection (1) of this section, shall notify the Director within 10 days after the deviation; as to the circumstances requiring the deviation, the outcome resulting from the deviation, and any additional information the Director may request . Such report shall be taken to have satisfied the requirements of Regulation 127.01.2.

3. Specific Operating Rules for External Cargo Loads

- (1) No person may conduct a rotorcraft external load operation without, or contrary to, the Rotorcraft/Load Combination Flight Manual published pursuant to regulation 127.04.2 of this Part.
- (2) No person shall operate a helicopter with an external load that is substantially different from any other rotorcraft/load combination that person has operated with, whether or not such combination is within the same class, unless;
 - (a) the pilot determines that the rotorcraft/load combination is within the weight and balance limitations for that aircraft,
 - (b) the external load is securely fastened in a manner does not interfere with any device provided for its emergency release,
 - (c) the pilot shall conduct an initial liftoff to verify satisfactory controllability,
 - (d) while in the hover, the pilot shall verify that directional control is adequate,
 - (e) Accelerate into forward flight to verify that no rotorcraft, or external load attitude is encountered in which the rotorcraft is uncontrollable or otherwise hazardous,
 - (f) In forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot, other crewmember or ground personnel may make this check and signal the pilot,
 - (g) Increase the forward airspeed and determine an operational airspeed at which no hazardous aerodynamic turbulence is encountered
- (3) The performance of any check prescribed above shall be in a manner that will not endanger persons or property on the surface and may be modified as the Director determines is appropriate for the rotorcraft/load combination in question.

- (4) Notwithstanding the provision of Part 91 of the MCARs, an air operator authorized to operated under this Part may conduct external load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with following:
 - (a) The operator must develop a plan for each complete operation, coordinate this plan with the IACM Officer having jurisdiction over the area in which the operation will be conducted, and obtain approval for the operation. The plan must include an agreement with the appropriate local officials to ensure:
 - (i) unauthorized persons are removed from the area in which the operation will be conducted,
 - (ii) coordination with air traffic control, if necessary, and
 - (iii) publishes a detailed chart depicting the flight routes and altitudes.
 - (b) Each flight must be conducted at an altitude, and on a route, that will allow a jettisonable external load to be released, and the rotorcraft landed, in an emergency without hazard to persons or property on the surface.
- (5) Notwithstanding the provisions of Part 91 of the MCARs, the holder of a Rotorcraft External Load Operator Certificate may conduct external load operations, including approaches, departures, and load positioning maneuvers necessary for the operation, below 500 feet above the surface and closer than 500 feet to persons, vessels, vehicles, and structures, if the operations are conducted without creating a hazard to persons or property on the surface.
- (6) No person may conduct rotorcraft external load operations under IFR unless specifically approved by the Director. However, under no circumstances may a person be carried as part of the external load under IFR.

4. Operating Limitations with External Loads

- (1) In addition to the operating limitations set forth in the approved Rotorcraft Flight Manual, and to any other limitations the Director may prescribe, the operator shall establish at least the following limitations and set them forth in the Rotorcraft/Load Combination Flight Manual for rotorcraft/load combination operations:
 - (a) The rotorcraft/load combination may be operated only within the weight and center of gravity limitations established in accordance with section 6. of this TS.
 - (b) The rotorcraft/load combination may not be operated with an external load weight exceeding that used in showing compliance with section 6 of this TS.
 - (c) The rotorcraft/load combination may not be operated at airspeeds greater than those established in accordance with section 1 of this TS.
 - (d) No person may conduct an external load operation under this part with a rotorcraft type certificated in the restricted category under section 21.04.1 of the MCARs over a densely populated area, in a congested airway, or near a busy airport where passenger transport operations are conducted.

5. Carriage of Persons with External Loads

- (1) No air operator may allow a person to be carried during rotorcraft external load operations unless that person; is a flight crewmember, is a flight crewmember trainee, performs an essential function in connection with the external load, or is necessary to accomplish the work activity associated with that operation.
- (2) prior to commencing any external load operation the pilot on command shall ensure that any person referred to in this Section is briefed on all normal, abnormal or emergency procedures as appropriate and with respect to the equipment used in the external load operation.

6. Structures and Design for External Loads

- (1) External load attaching means. Each external load attaching means must have been approved under the provisions of Part 21.
- (2) Quick release devices. Each quick release device must have been approved under the provisions of Part 21.
- (3) Weight and center of gravity:
 - (a) Weight. The total weight of the rotorcraft/load combination must not exceed the total weight approved for the rotorcraft during its type certification.
 - (b) Center of gravity. The location of the center gravity must, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft/load combinations, the magnitude and direction of the loading force must be established at those values for which the effective location of the center of gravity remains within its established range.
- (4) The rotorcraft/load combination of Class D may be conducted only in accordance with the following:
 - (a) The rotorcraft to be used must have been type certificated under transport Category A for the operating weight and provide hover capability with one engine inoperative at that operating weight and altitude.
 - (b) The rotorcraft must be equipped to allow direct radio intercommunication among required crewmembers.
 - (c) The personnel lifting device must be approved by the Director.
 - (d) The lifting device must have an emergency release mechanism requiring two distinct actions.

7. Markings and Placards Relating to External Loads

- (1) The following markings and placards must be displayed conspicuously and must be such that they cannot be easily erased, disfigured, or obscured:

- (a) A placard (displayed in the cockpit or cabin) stating the class of rotorcraft/load combination for which the rotorcraft has been approved and the occupancy limitation prescribed in section 4
- (b) A placard, marking, or instruction (displayed next to the external load attaching means) stating the maximum external load prescribed as an operating limitation in section 4.(1)b.

8. Airworthiness Certification for External Cargo Loads

Each Helicopter used in the carriage of external loads must have issued to it a current and valid certificate of airworthiness containing such special provisions necessary to authorize the carriage of external loads.

127.09.2 OPERATOR'S MAINTENANCE CONTROL MANUAL

An Air Operator's Maintenance Control Manual shall be developed in accordance with the following guidance material entitled ***Minimum Contents for a Maintenance Control Manual Part 127 Operator.***

127.09.5 CONTINUING AIRWORTHINESS INFORMATION

The monitor and assess maintenance and operational experience with respect to continuing airworthiness shall be made and the requested information shall be provided in accordance with the guidance material entitled ***Minimum Contents for a Maintenance Control Manual Part 127 Operator.***

ANNEX A PILOT-IN-COMMAND'S DISCRETION REPORT**SECTION 1: EXTENSION OF FLIGHT DUTY PERIOD****Part A: Operator**

Aircraft type
 Flight number
 Pilot-in-command
 Date

Note: If discretion exercised for part crew or individual state name(s) and operating capacity below.

Part B: Flight details

1. Crew acclimatised to time zone YES / NO *
2. Length of preceding rest eighteen to thirty hrs/under eighteen or over thirty hours *
3. Split duty: actual time off time on
4. Extended FDP for in-flight relief YES / NO *

**Delete inapplicable items*

FLIGHT DETAILS						
Schedule (planned)				Actual		
	Place	UTC	Local		UTC	Local
Duty Started				Duty Started		
Depart				Departed		
Arrive				Arrived		
Depart				Departed		
Arrive				Arrived		
Depart				Departed		
Arrive				Arrived		
Depart				Departed		
Arrive				Arrived		
FDP to end				FDP ended		
Scheduled FDP				Actual FDP		
Maximum Authorized FDP Total Hours:				Form:		To

Part C: Pilot-in-command's report giving reasons

Signed :
 Date :
 Operator's remarks / Action taken
 Signed :
 Date :
 Forwarded to CAA
 Date :

SECTION 2: REDUCTION OF REST

Note: All times to be recorded as date/time six-figure groups, expressed in both UTC and Local Time.

Part A: Operator

Aircraft type
Flight number
Pilot-in-command
Date

Note: If discretion exercised for part crew or individual state name(s) and operating capacity below.

Part B: Last duty started.....UTC/Local
Last duty ended.....UTC/Local
Rest earned.....Hours
Calculated earliest next available.....UTC/Local
Actual start of next FDP.....UTC/Local
Rest period reduced by crew affected.....UTC/Local

Part C: Pilot-in-command's report

Signed :
Date :
Operator's remarks / Action taken
Signed :
Date :
Forwarded to IACM
Filed

ANNEX B AIR OPERATOR CERTIFICATE



Telephone number:

258 21465416

Fax Number:

258 21465415

Physical address:

Alameda do Aeroporto, Maputo

Postal address:

Caixa Postal 227, Maputo

E-mail

iacm@tvcabo.co.za

File Number

19001/AO

-GEN

19001/AO

-CER

REPUBLIC OF MOZAMBIQUE

INSTITUTO DE AVIAÇÃO CIVIL DE MOÇAMBIQUE

AIR OPERATOR CERTIFICATE

This certifies that

(Company Airline Name)

has met the requirements of the Mozambique Flight Safety Law and the Mozambique Civil Aviation Regulations and the Technical Standards prescribed thereunder for the issuance of this certificate and is hereby authorized to conduct commercial air transportation operations in accordance with said regulations and standards prescribed thereunder and the terms, conditions and limitations contained in the attached operations specifications.

This certificate is not transferable and, unless sooner surrendered, suspended or revoked, shall continue in effect until otherwise terminated.

Director General IACM

Certificate number _____ by _____
(name)

Effective date _____
(signature)

Issued at _____
(title)

ANNEX C APPLICATION FORMS FOR AIR OPERATOR CERTIFICATE

- 1. STATEMENT OF INTENT;**
- 2. AERODROMES;**
- 3. AIRCRAFT;**
- 4. PERSONNEL;**
- 5. MAINTENANCE;**
- 6. CHIEF PILOT**
- 7. PASSENGER CARRYING AUTHORITY CABIN SAFETY**

**Statement of Intent**

File Number

19001/AO

-GEN

19001/AO

-CER

Telephone number:

258 21465416

Fax Number:

258 21465415

Physical address:

Alameda do Aeroporto, Maputo

Postal address:

Caixa Postal 227, Maputo

E-mail

iacm@tvcabo.co.za**PART ONE: TO BE COMPLETED BY APPLICANT**

Legal name and Trade Name, address and Postal Code of applicant

Principle Base of Business

Telephone Number/s	Facsimile Number/s	e-mail address	ATLE License type and number

I understand that the above named company must meet all Air Transport Legal and Economic (ATLE) Licensing Requirements with respect to all matters regulating the issue of an ATLE license. I further understand that the above named company shall not commence operation until it is possession of an ATLE License.

Proposed Start of Operations Date

YYYY	MM	DD

Name and Title of company Executive

Signature to certify understanding

PROPOSED TYPE OF SERVICE

() Domestic () Scheduled - () Non-Scheduled
() International () Scheduled - () Non-Scheduled

() Aviation Training Organization as selected
from the pick list on the reverse side

() Aerial Work. as selected from
the pick list on the reverse side

AREA OF OPERATION (Aerodrome location identifier and name or (Lat. & Long. Coordinates))

Base(s)

Aircraft Types

Name of approved maintenance organization (if available)

Approval No

OPERATING CONDITIONS (Check where applicable)

Authorization	Operating conditions						
	Day	Night	VFR	IFR	Passengers and Cargo	Passengers only	Cargo only
Multi-engine aircraft							
Rotorcraft							
Single-engine aircraft							

COMPANY EXECUTIVE OR AUTHORIZED PERSON

Name

I certify that all the statements herein are true and complete to the best of my knowledge

(YY MM DD -)

Signature
(of person duly authorized to execute this application on behalf of the applicant)

Title

PART TWO: TO BE COMPLETED BY THE IACM

Names of Principal Inspectors

Operations

Airworthiness

Licensing

Approving Signatures

Director of Flight Safety

Director General IACM

See reverse for instructions and pick lists

NOTICE

IACM will not undertake a quality assurance role with regard to any form or document submitted in application for a service. Documentation that contains errors or does not meet regulatory requirements will be returned for correction.

Delays thus incurred are the sole responsibility of the applicant.

Applicants are encouraged to review MCAR 121.06.2 and 135.06.2 as applicable

	Types of Aerial Work Specialty Operations		Types of Aviation Training Organization Operations
1	Aerial Advertising	18	Flight Training
2	Aerial Construction	19	Maintenance Training
3	Aerial Inspection and Surveillance	20	Ground Service Training
4	Aerial Harvesting	21	Aviation Medicine Training
5	Aerial Mapping	22	Security Training
6	Aerial Photography	23	Dangerous Goods Training
7	Aerial Sightseeing	24	Cabin Crew Training
8	Aerial Spraying	25	Dispatcher Training
9	Aerial Surveying		Others
10	External Load Charge		
11	Fire Fighting		
12	Recreational Flying		
13	Forest Fire Management		
14	Glider Tower		
15	Heli-logging		
16	Parachute Jumping		
17	Wild Life Management		

**Aerodrome**

File Number

19001/AO -GEN

19001/AO -CER

258 21465415

Telephone number: 258 21465416 Fax Number:

Physical address: Alameda do Aeroporto, Maputo

Postal address: Caixa Postal 227, Maputo E-mail

iacm@tvcabo.co.za

1. Name of Air Operator -				Address											
2. (a) Aerodrome				(Name and Geographic Coordinates)						Identifier/					
Aerodrome certified		Yes	No	Aerodrome status and suitability		Public	Private	Day	Night	VFR	IFR	Land	Water	Helipoint	
Cert. No.		Dated													
(b) Name of aerodrome operator				Telephone No.				Fax/E-Mail							
(c) Air operator telephone, radio or other means of communications										(d) Air traffic control					
										<input type="checkbox"/> Yes <input type="checkbox"/> - No					
(e) Navigational and landing aids										Hrs of operation					
NDB	VOR	PAR	ASR	GPS	MLS	OTHER		To							
(f) AERODROME EMERGENCY															
(g) Uncertified aerodrome, not in AIP, give runway details (with LAT. & LONG.)															
3. Facilities available at this airport/aerodrome				(b) Meteorological		(c) Weather report contains all essential information normally found in AIP weather sequence									
(a) Communications				1) Forecast - <input type="checkbox"/> Yes <input type="checkbox"/> No 2) Weather Report - <input type="checkbox"/> Yes <input type="checkbox"/> No		(____) Yes (____) No									
(d) First Aid -				(e) Passenger accommodation -				(f) Hangar							
(g) Refuelling facilities				(h) Available surface transportation -											
4. Base		Scheduled Points -				Type of operation - Type									
<input type="checkbox"/> Main <input type="checkbox"/> Sub-		<input type="checkbox"/> Aerodrome <input type="checkbox"/> Base				<input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> VFR <input type="checkbox"/> IFR									
5 (a) Aircraft types -		(b) Aircraft of 5700 KG. (MCTOW) and over Specify max allowable weight.				(c) Pavement evaluation required									
						<input type="checkbox"/> Yes <input type="checkbox"/> No									
6. I hereby certify that the above information is correct															
Date YY MM DD				Signature by a duly authorized person to sign on behalf of the Air Operator				Title							
7. Aerodrome Safety comments															
I hereby certify that the information specified herein is correct as listed in section 2															
Date YY MM DD				Aerodrome Safety and Security											
8. I hereby certify that the facilities listed in section 3 are satisfactory for the type(s) of aircraft and operation listed in sections 4 and 5.															
Date YY MM DD				IACM POI											

See reverse side for assistance

INSTRUCTIONS

NOTICE

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Delays thus incurred are the sole responsibility of the applicant.

Applicants are encouraged to review MCAR 121.06.2 and 135.06.2 as applicable

General

This form should be printed or typed and signed by a company's designated official, i.e. Operations Manager or have the company seal affixed.

Sections

1. The full name and full address of the air operator including the postal code.
2. (a) The location of the aerodrome and with the co-ordinates and identifiers for remote aerodrome, registration or certificate numbers public/private etc.;
- (b) The name and telephone number of the aerodrome or airport operator;
- (c)(d)(e) Name of the air operator, phone no., aids and facilities available at the aerodrome. Check appropriate box.
- (f) Detail what fire fighting and rescue equipment is available and if this information is published check for accuracy
- (g) If the aerodrome is uncertified attach a note giving some details i.e. runway dimension, type of surface, etc., (75' x 3500') gravel) with latitude and longitude
3. The information required in paragraphs (a) to (g) as the details are self explanatory.
4. If the Scheduled points are from a base, an aerodrome the type of operations at an uncertified aerodrome. An aerodrome may be used as a Scheduled point provided it is approved by the Director.
5. (a) List the types of aircraft that the air operator wishes to operate into the aerodrome, i.e. PA-31, C-185, DHC-2, etc.;
- (b) List the air operator's aircraft with a (MCTOW) of 12500 lbs and over;
- (c) If a pavement evaluation is required.

**Aircraft**

File Number

19001/AO

-GEN

19001/AO

-CER

Telephone number:

258 21465416

Fax Number:

258 21465415

Physical address:

Alameda do Aeroporto, Maputo

Postal address:

Caixa Postal 227, Maputo

E-mail

iacm@tvcabo.co.za

1. Name of Air Operator																				
2. Address																				
3. Aircraft Type				Marks			Serial No.			Certificate of Airworthiness Date (Y-A - M - D-J)										
4. Engine Type				<input type="checkbox"/> Turbine <input type="checkbox"/> Piston			Number of Engines													
5. (a) Maximum certificated take-off weight							(c) <input type="checkbox"/> Wheels <input type="checkbox"/> Skis <input type="checkbox"/> Float <input type="checkbox"/> Amphibious													
6. (b) Maximum number of passengers							(d) FDR <input type="checkbox"/> Yes <input type="checkbox"/> No No. of parameters <input style="width:50px;" type="text"/>			CVR ~		Yes		No						
7. Aircraft flight manual approved																				
8. Flight Instruments in accordance with: ,				IFR MCAR Part 91.04.5																
				VFR OTT MCAR-Part 91.0404																
				VFR Night MCAR Part 91.04.3																
9. Autopilot				Yes No			Type				Number of axis ,									
10. Radio Equipment		Communication			Navigation and Approach Aids							Other								
		<input type="checkbox"/> VHF <input type="checkbox"/> UHF <input type="checkbox"/> ILS <input type="checkbox"/> VOR <input type="checkbox"/> DME <input type="checkbox"/> ADF <input type="checkbox"/> CAT II <input type="checkbox"/> HF <input type="checkbox"/> RVSM <input type="checkbox"/> INS <input type="checkbox"/> GPS <input type="checkbox"/> TRX..... <input type="checkbox"/> CAT III			<input type="checkbox"/> ELT (type) _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____															
11. Safety feature cards complies as and where applicable, with		Yes		No		A/A		Yes		No		N/A		Yes		No		N/A		
		MCAR 91.07.20						MCAR 121.07.29-30 & MOZ-CZTS-OPS 121						MCAR135.07.33&34 & MOZ-CATS-OPS 135				MCAR 127.07.32&33 & MOZ-CATSOPS 127		
12. Oxygen equipment complies as applicable with:				MCARS 91.04.17 – 18 – 19 – 20 & 21											Yes		No		N/A	
13. Life saving equipment complies with				MCAR/91.04.27											Yes		No		N/A	
14. Survival equipment complies with				MCAR 91.04.29 (as applicable)											Yes		No		N/A	
15. First aid kit complies with				MCAR 91.04.16											Yes		No		N/A	
16. Applicable maintenance schedule																				
17. I certify that the above data is correct																				
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 30%;"> _____ Date (Y-A - M - D-J) </div> <div style="width: 40%;"> _____ Signature (of person duly authorized to execute this application on behalf of the air operator) </div> <div style="width: 30%;"> _____ Title </div> </div>																				
IACM USE																				
The maintenance schedule is acceptable for the aircraft indicated. Recommended for Approval										I certify that the aircraft and equipment are adequate for the operations covered by this application. Recommended for Approval										
Date (YY MM DD)										Date (YY MM DD)										
Aircraft Maintenance and Manufacturing										Flight Operations										

See reverse for instructions

INSTRUCTIONS

NOTICE

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Delays thus Incurred are the sole responsibility of the applicant.

Applicants are encouraged to review MCAR 121.06.2 and 135.06.2 as applicable

General

This form should be printed or typed and signed by a company's designated official, i.e. Operations Manager or have the company seal affixed

Sections

1. The full name of the air operator.
 2. The full address of the air operator including the postal code,
 3. Aircraft Type
DHC2, B55, etc. Registration Marks – C9-XXX, etc. Certificate of Airworthiness, date of issue.
 4. Engine Type. Check - Turbine or Piston and indicate the number of engines.
 5. Maximum certificated take-off weight.
 - (a) Shall be authorized by aircraft type approval.
 - (b) Based on seats available excluding the pilots and as per aircraft type approval. Passenger/Cargo or Cargo Only.
 - (c) Check one or more.
 - (d) Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR) as required by MCARS Part 91.
 6. The aircraft flight manual shall be in the possession of the air operator and, where applicable, a Minimum Equipment List (MEL) in accordance with MCARS. This manual may still be under development.
- Indicate (Yes) or (No) if the flight instruments meet the MCARS requirements for IFR, VFR, OTT or VFR Night.
Note: Night VFR and VFR OTT is still under review.
- If yes, give type of auto pilot and number of axis. **NOTE:** Functioning auto pilot required for single pilot IFR operations as per .
9. Radio Equipment, Navigation, Communication. List number and types installed in aircraft I Narco MK 12 VHF Nav/Com; 1 King 175 VHF Nav/Com. .The ELT type as per column III, Table, MCAR 135.02.5
 10. Visible placards of information conforms to MCARS or the Safety Feature Cards information conforms to MCAR
 11. As applicable indicate which of the following CARS that the oxygen equipment applies – MCARS 91.04.17,18,19,&20.
 12. Confirm that the Life-Saving equipment conforms to MCAR 91.04.27 and that the Survival equipment conforms to MCAR 91.04.29 (as applicable).
 13. Confirm that the First Aid Kit complies with the following MCAR 91.04.16 or 705.90.
 14. Indicate the maintenance schedule which will be used for the aircraft described.
 15. The form must be signed by a person duly authorized to execute the application on behalf of the air operator.

**Personnel**

File Number

19001/AO

-GEN

19001/A0

-CER

Telephone number:

258 21465416

Fax Number:

258 21465415

Physical address:

Alameda do Aeroporto
Caixa Postal 227,
Maputo

E-mail

iacm@tvcabo.co.za

Postal address:

1. Name of Air Operator				
Address				
2. SUPERVISORY PERSONNEL – Attach qualification, licences, certificates, endorsements resume giving position title, name, and experience for:				
(a) Operations manager		(b) Chief Pilot		
Name-Nom	Licence No.	Name	Licence No.	
(c) Person responsible for Maintenance control system		(d) Company Aviation Safety Officer		
Name-Nom	Licence No.	Name	Licence No.	
(e) Flight Dispatcher		(e) Manager of Cabin Safety		
Name-Nom	Licence No.			
3. OPERATING PERSONNEL (Trained and Qualified in Accordance with the Applicable Part of the MCAR)				
Number of:				
Pilot-in-command	Second-in-command/First Officers	Airworthiness Maintenance Engineers	Flight/Cabin Attendant	Flight Dispatcher
4. I hereby certify that the qualifications of the foregoing personnel meet the requirements and/or the applicable CAR for operating the proposed Service				
Date (Y-A-M-D-J)		Signature (of person duly authorized to execute this application on behalf of the air operator)		Title
FOR IACM USE ONLY				
I certify the person responsible for the maintenance control system has been briefed/tested and is qualified to serve as nominated and the listed AMEs' records confirm they meet the requirements to perform their assigned tasks.		The Operational Supervisory personnel have been briefed/tested and are qualified for their respective positions. The records of the personnel listed are qualified to perform their assigned tasks		
Date YY MM DD	Signature Principal Airworthiness Inspector	Date YY MM DD	Signature Principal Flight Operations Inspector	
I certify the person responsible for the maintenance control system meets the requirements of MCAR Part _____ and has the experience, knowledge and background to serve in the position requested.		I certify the above flight operations supervisory personnel meet the Requirements of MACR Part _____ and have the experience, knowledge and background to serve in the positions requested.		
Date YY MM DD	Signature Manager of Airworthiness	Date YY MM DD	Signature Manager of Flight Operations	
Based upon the above certifications I am satisfied that the applicant has met the personnel requirements for the issuance of an Air Operator Certificate and recommend appropriate authorities be issued.		This is to confirm that appropriate authorizations may be issued to the supervisory personnel		
Date YY MM DD	Signature Director of Flight Safety	Date YY MM DD	Signature Director General	

See reverse for instructions

INSTRUCTIONS

Notice

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Delays thus incurred are the sole responsibility of the applicant.

Applicants are encouraged to review MCAR 121.06.2 and 135.06.2 as applicable

General

This form should be printed or typed and signed by a company's designated official, i.e. Operations Manager or have the company seal affixed.

Sections

1. The full name and full address of the air operator applicant
2. **Supervisory Personnel**
 - (a) Give the full name and, where applicable, the licence number of the operations manager and ensure the name agrees with the company organization chart. Complete and attach his resume of experience and qualifications which must comply with the appropriate Part of the MCAR for IACM approval.
 - (b) Give the full name and licence number of the chief pilot and ensure the name agrees with company organization chart. Complete and attach his resume of experience and qualifications which must comply with the appropriate Part of the MCAR for IACM approval.
 - (c) Give the full name of the person responsible of the maintenance control system and ensure the name agrees with company organization chart. Complete and attach his resume of experience and qualifications which must comply with the appropriate Part of the MCAR for IACM approval.
 - (d) Give the full name and licence number of the Person Responsible for Maintenance (referr to him/her by the title given to the position by the company. IE "Director of Maintenance" ensure the name agrees with company organization chart. Complete and attach his resume of experience and qualifications which must comply with the appropriate subpart VII of the CAR for TC's approval.
 - (e) Give the full name and certificate number of the Head Flight Dispatcher and ensure the name agrees with company organization chart. Complete and attach his resume of experience and qualifications which must comply with the appropriate Part of the MCAR for IACM approval.
 - (f) Indicate the number of pilots-in-command, seconds-in command, flight attendants, flight dispatchers and AMEs who have been hired by the company and trained in accordance with the relevant training programs
 - (g) The form must be signed by the person duly authorized to execute the application on behalf of the air operator.

**Maintenance**

File Number

19001/AO

-GEN

19001/AO

-CER

Telephone number:

258 21465416

Fax Number:

258 21465415

Physical address:

Alameda do Aeroporto, Maputo

Postal address:

Caixa Postal 227, Maputo

E-mail

iacm@tvocabo.co.za

1. Name of Air Operator			
Address			Telephone No.
2. Make and Model of Aircraft Operated			Number of Aircraft Operated
3. Location of Main Maintenance Base		Maintenance Sub-Bases (as applicable)	
4. Air operator's maintenance control manual		Latest Amendment Number	
Date Submitted - YYYY-MM-DD	Date Approved YYYY-MM-DD	Date Submitted YYYY-MM-DD	Date Approved YYYY-MM-DD
5. (a) <input type="checkbox"/> Air operator AMO			Approval No. / Categories / Ratings
(b) <input type="checkbox"/> Maintenance contracted with an AMO			Approval No. / Categories / Ratings
Name and address			
(1)			
(2)			
(3)			
6. All the statements contained herein are true and complete to the best of my knowledge in accordance with the requirements of			
Date YYY-MM-DD	Signature person duly authorized to execute this application on behalf of the air operator		Title
FOR IACM USE ONLY			
7. The maintenance arrangements mentioned in section 5 are satisfactory for the aircraft types operated.			
Signature..... Aircraft Maintenance			...Date YYYY-MM-DD

See reverse for instructions

NOTICE

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Delays thus incurred are the sole responsibility of the applicant.

Applicants are encouraged to review MCAR 121.06.2 and 135.06.2 as applicable

**Chief Pilot**

File Number

19001/AO

-GEN

19001/AO

-CER

Telephone number:

258 21465416

Fax Number:

258 21465415

Physical address:

Alameda do Aeroporto, Maputo

Postal address:

Caixa Postal 227, Maputo

E-mail

iacm@tvcabo.co.za

Name of Air Operator	Headquarters File Number	Regional File Number				
Name of Nominee	Licence Number					
Hours Flown						
Pilot-in-Command Multi-Engine	Pilot-in-Command Single Engine	Grand Total Flying Time				
Aviation Background (Companies, Duties and Aeroplane Types)		Dates				
		From		To		
Supervisory Experience		From		To		
Suitability for Duties as Laid Out in Company Operations Manual						
I certify that to the best of my knowledge the information provided above is true_____						
Signature of Nominee					Date	
_____					_____	
Signature and Title of Company Executive					Date	
IACM Use Only						
1. Recommendation of FOI (If Required) Examination () Yes () No () Not Required						

Signature of FOI					Date YY MM DD	
2. Manager Flight Operations Recommendation/Action						

Signature of Regional Manager or Director					Date YY MM	
DD						
3. Director of Flight Safety Approving conditions or limitations						

Signature Date					YY MM DD	



Passenger Carrying Authority CABIN SAFETY

File Number

19001/AO

-GEN

19001/AO

-CER

Telephone number:

258 21465416

Fax Number:

258 21465415

Physical address:

Alameda do Aeroporto, Maputo

Postal address:

Caixa Postal 227, Maputo

E-mail

iacm@tvcano.co.za

Name of Air Operator		Base	
Address and Telephone No.			
APPLICANT'S USE		Documents Submitted	FOR IACM USE
		Date (Y/A-M-D/J)	Meets Stand. (Y/A-M-D/J) Approved (Y/A-M-D/J)

See instruction on the reverse side

ALL OPERATIONS

Safety Features Cards for these Aircraft Types:			not applicable
Passenger and Cabin Safety Procedures			not applicable
Briefing of Passengers			not applicable
Aircraft Inspection			not applicable

OPERATIONS WITH FLIGHT ATTENDANTS

Flight Attendant Manager Qualifications				not applicable	
Flight Attendant Training Program - (See note on back)	initial	Annual		not applicable	
Flight Attendant Training Syllabus (See note on back)				not applicable	
Line Indoctrination Training				not applicable	
Record Keeping System for Training and Qualifications					not applicable
Instructor Qualifications					not applicable
Training Facilities					not applicable
Cabin Emergency Evacuation Trainer				not applicable	
Flight Attendant Manual - (See Note on back)				not applicable	
Flight Attendant Stations				not applicable	
Minimum Number of Flight Attendants per Aircraft Type				not applicable	
Carry-on Baggage Control Program				not applicable	
I understand that the above information is correct					
Date (Y/A-M-D/J)		Signature (of person duly authorized to execute this application on behalf of the air operator)		Title	
FOR IACM USE ONLY					
This confirms that all the Cabin Safety requirements have been met.					
Date (Y/A M D/J)		Cabin Safety Inspector			
Date (Y/A-M-D/J)		Director of Flight Safety			

NOTICE

IACM will not undertake a quality assurance role with regard to any form or document submitted in application for a service. Documentation that contains errors or does not meet regulatory requirements will be returned for correction.

Delays thus incurred are the sole responsibility of the applicant.

1. This form is used for the initial issue and / or amendment of an air operator certificate (AOC) and the addition of a new aircraft type to the air operator certificate.
2. Coordination is required with the Cabin Safety Division whenever there are requirements to amend or issue an AOC or an operation specification pertaining to Cabin Safety.
3. The shaded areas are for IACM use only. The applicant completes the white area of the form.
4. At the top right-hand of the form, the inspector enters the file numbers, whether this form is for initial issuance of an AOC or an amendment to an existing AOC and the date that the form was received from the applicant.
5. The applicant enters the name, address, and base of the air operator.
6. The applicant enters the aircraft type(s) and the date on which the safety features' cards were submitted.
7. For each line entry, the applicant enters the date submitted and a reference(R) to where the information relative to the item is located (i.e., Flight Operations Manual, Chapter 4, pages 3-6; Flight Attendant Manual, Chapter 3 section 3.8; Agent's Handbook sections 5.6 - 6.7) or attaches a copy of the item with the form.
8. For each line entry, the inspector enters the date on which the information was evaluated and determined to either meet the standards or was approved.
9. The applicant signs the form attesting to the correctness of the information.
10. The Cabin Safety Inspector signs the form confirming that all cabin safety requirements have been met before the applicable IACM division signs off.
11. Flight attendant training may not commence until the **Flight Attendant Training Program** has received written conditional approval and the **Flight Attendant Manual** has received written approval.
12. **Annual Flight Attendant Training Syllabus and Program** do not require approval during the Initial Certification process. The documents must be submitted for review and approval no later than 90 days before Annual training is due.
13. For operations with flight attendants and depending on the complexity of the operation or the documents:
 - (a) the certification process for an **initial** air operator certificate can take between 60 to 90 days to complete from the date the documents are received;
 - (b) the certification process to **amend** an air operator certificate can take between 30 to 60 days to complete from the date the documents are received.