

# GOVERNMENT GAZETTE

## OF THE

# REPUBLIC OF NAMIBIA

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N\$27.20

WINDHOEK - 28 April 2003

No.2968

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## General Notice

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### MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

No. 79 2003

#### PROPOSED CIVIL AVIATION TECHNICAL STANDARDS NAM-CATS-OPS 127 "AIR TRANSPORT OPERATIONS - HELICOPTERS"

The Ministry of Works, Transport and Communication recently initiated the project to update the current Namibian aviation legislation. There are two main reasons for updating the aviation legislation, namely, the current legislation does not adequately reflect the policies of Namibia for the aviation sector and does not reflect recent developments within SADC. The project further aims to enhance the safety of civil aviation by ensuring that the Namibian legislation complies with the minimum standards prescribed by the International Civil Aviation Organization.

In this regard the legislative reform process involves the updating of the regulations made under the Aviation Act (Act No. 74 of 1962). It also involves the issuing Technical Standards by the Director of Civil Aviation.

The Technical Standard proposed in this General Notice is one of thirty four (34) technical standards associated with the Namibian Civil Aviation Regulations, 2001.

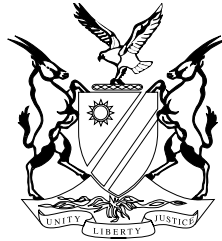
Pursuant to the provisions of regulation 11.03.2 the Director: Civil Aviation hereby invites all interested parties to comment on the proposed NAM-CATS-OPS 127 "Air Transport Operations - Helicopters".

Comments or representations should be lodged in writing and should reach the Ministry no later than 30 days from the date of publication of this notice. Correspondence should be addressed to:

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**REPUBLIC OF NAMIBIA**

**CIVIL AVIATION**

**DOCUMENT NAM-CATS-OPS 127  
(AIR TRANSPORT OPERATIONS: HELICOPTERS)**

## **NAMIBIAN CIVIL AVIATION TECHNICAL STANDARDS RELATING TO AIR TRANSPORT OPERATIONS : HELICOPTERS**

### **1. GENERAL**

Section 22A of the Aviation Act, 1962 (as amended by section 5 of the Aviation Amendment Act, 1998) empowers the Director: Civil Aviation to issue technical standards for civil aviation on the matters which are prescribed by regulation.

### **2. PURPOSE**

Document NAM-CATS-OPS 127 contains the standards, rules, requirements, methods, specifications, characteristics and procedures which are applicable in respect of air transport operations : helicopters.

Each reference to a technical standard in this document, is a reference to the corresponding regulation in the Namibian Civil Aviation Regulations, 2001, for example, technical standard 127.03.1 refers to regulation 1 of Subpart 03 of Part 127 of the Regulations.

The abbreviation "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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**127.01.5 INFORMATION ON EMERGENCY AND SURVIVAL EQUIPMENT CARRIED****1. Emergency and survival list**

The operator must have a list containing the following minimum information regarding the emergency and survival equipment carried on board:

- (1) The number, colour and type of life rafts and pyrotechnics;
- (2) details of emergency medical supplies;
- (3) water supplies; and
- (4) type and frequencies of emergency portable radio equipment.

**127.01.9 ELECTRONIC DEVICES****1. Operation of electronic devices on board a helicopter during flight time**

- (a) Electronic devices which are not intentional transmitters of radio signals, may, with the prior permission of the pilot-in-command, be operated on board a helicopter, but only in the cruise phase of flight.

Examples of such devices are -

- (1) laptop computers;
- (2) video cameras;
- (3) tape recorders;
- (4) electronic entertainment devices; and
- (5) hand held calculators.

- (b) Cellular or Mobile Telephones shall not be operated on board a helicopter once the engines been started and shall remain switched off until the doors of the helicopter are opened at the end of the flight.

#### **127.01.15 SUBCHARTERING**

##### **1. Subchartering**

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

#### **127.02.3 CREW MEMBER EMERGENCY DUTIES**

##### **1. Emergency evacuation demonstration**

An emergency evacuation demonstration must be performed by the 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.

#### **127.02.6 DUTIES OF PILOT-IN-COMMAND REGARDING FLIGHT PREPARATION**

##### **1. Category II approach**

A Category II approach is an ILS approach procedure which provides for an approach to a decision height lower than 200 feet but not lower than 100 feet and a RVR of not less than 350 m.

##### **2. Category III approach**

A Category III approach is divided into a -

- (1) Category III A approach, which is an ILS approach procedure which provides for an approach with either a decision height lower than 100 feet or with no decision height and with a RVR of not less than 200 m;
- (2) Category III B approach, which is an ILS approach procedure which provides for an approach with either a decision height lower than 50 feet or with no decision height and with a RVR of less than 200 m but not less than 50 m; and
- (3) Category III C approach which is an ILS approach procedure which provides for an approach with no decision height and no RVR limitations.

##### **3. Adequate and suitable aerodromes**

For the purposes of CAR 127.02.6(1)(s) -

- (1) An adequate aerodrome is an aerodrome licensed or approved or an aerodrome in an urban area approved in terms of Part 139 or is found to be equivalent to the safety requirements prescribed in Part 139; and
- (2) a suitable aerodrome is an adequate aerodrome with weather reports, or forecasts or any combination thereof, indicating that the weather conditions are at or above operating minima, as specified in the operation specifications, the field condition reports indicate that a safe landing can be accomplished at the time of the intended operation and the facilities necessary to complete an approach at such aerodrome is operational.

#### **127.02.9 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 CAR 127.02.3 or were assumed to have taken part in the relevant analysis required during the certification of the helicopter.

#### **127.02.10 OPERATION ON MORE THAN ONE TYPE OR VARIANT BY CABIN CREW MEMBER**

##### **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.
- (4) Helicopter variants not meeting these criteria are considered to be a separate helicopter type.

#### **127.02.14 FLIGHT TIME AND DUTY SCHEME**

##### **1. Definitions**

Any word or expression to which a meaning has been assigned in the Aviation Act, 1962, and the Namibian Civil Aviation Regulations, 2001, bears, when used in this technical standard, the same meaning unless the context indicates otherwise, and -

“days off” means periods available for leisure and relaxation, no part of which forms part of a duty period. A single day off includes 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 behest 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, office duties, flight watch, home reserve and standby duty;

“flight duty period” means any time during which a person operates in a 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, or rotors stopped, 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;

“Late Finish/Early Start” means any duty that is carried out within any part of the period 0100 to 0659 hours local time;

“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 a period before starting a flight duty period which is intended to ensure that a flight crew member is adequately rested before a flight;

“sector” means the time between a helicopter first moving under its own power until it next comes to rest after landing, on the designated parking position;

“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;

“suitable accommodation” means a well-furnished bedroom which is subject to minimum noise, is well ventilated, and has a facility to control the levels of light and temperature;

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

“travelling” means all the time spent by a crew member transiting between the place of rest, and the place of reporting for duty;

“week” means a period of seven consecutive days starting at any set time and on any set day as specified and stated by the operator.

## **2. Requirements of the Namibian Civil Aviation Regulations, 2001**

- (1) CAR 127.02.14 requires that an operator of a helicopter must have a scheme for the regulation of flight times and duty times of the flight crew.
- (2) CAR 127.02.14 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 approval.
- (3) Non-availability of auto pilot or auto stabilisation systems requires a reduction in flight time and duty period in respect of commercial 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 crew 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 pre-flight notification of duty to flight crew, other than those on standby; and
  - (c) the need to plan time off and also to ensure that flight crew members 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, 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.

(3) Mixed Duties

When a crew member is required to report for duty in advance of the stipulated report time for a scheduled flight, to carry out a task at the best of the company, then the time spent of that task shall be part of the subsequent FDP.

(4) Mixed Simulator and Helicopter Flying

When a flight crew member flies in the simulator, either on a check or training flight, or as a Training Captain or Instructor, and then within the same duty period flies as a flight crew member on a public transport flight, all the time spent in the simulator is counted in full towards the subsequent FDP and daily flying hour maxima. The FDP allowable is calculated from the report time of the simulator detail.

(5) Mixed Single Pilot/Two Pilot Operations

In one duty period a pilot may fly as single flight crew up to the point where the total flying and duty hours reach the single flight crew FDP limit. During this time the pilot may fly either in command, or as a co-pilot on a two-flight crew helicopter. The pilot may then continue beyond the single flight crew FDP limit in a two-flight crew operation up to the two-flight crew FDP and flying hour maxima, but may only fly as a co-pilot.

## **7. Limitations of single flight duty periods - flight 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 or 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.

### **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 cockpit 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 Table 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 flight 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 Travelling time

- (1) Travelling 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:** *Travelling 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 travelling 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 travelling 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.
- (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 flight 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 judgement 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 helicopter 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. When away from base opportunities and facilities for adequate pre-flight rest shall be provided by the operator in suitable accommodation. When operations are carried out at such short notice that it is impracticable for an operator to ensure that rest



accommodation is suitable, it will be the pilot-in-command's responsibility to obtain suitable accommodation.

- (2) The minimum rest period which must be taken before undertaking a flying duty period shall be:
- (a) at least as long as the preceding duty period, or
  - (b) 12 hours, whichever is the greater.

In the case when the rest period earned by a crew member is 12 hours, and suitable accommodation is provided by the company, then that rest period may be reduced by one hour. In such circumstances, if the travelling time between the aerodrome and the accommodation is more than 30 minutes each way then the rest period will be increased by the amount the total time spent travelling exceeds one hour. The room allocated to the crew member will be available for occupation for a minimum of 10 hours. This subparagraph does not apply to rest periods that exceed 12 hours.

If the preceding duty period, which includes any time spent on positioning, exceeded 18 hours, then the ensuing rest period must include a local night.

After being called out from a standby duty the length of the minimum rest period shall be determined by the length of standby duty, plus any time spent on positioning, and any FDP completed. Crew members who inform the Company that they are having difficulty in achieving adequate pre flight rest will be given the opportunity to consult in aviation medical specialist.

- (3) 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)).

- (4) 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

Wherever possible, and if required by the crew member, days off will be taken in the home environment. A single day off for helicopter crew shall include two local nights, and shall be of at least 36 hours duration. A planned rest period may be included as part of a day off.

Crew members will

- (a) not work more than 7 consecutive days,
- (b) have 2 consecutive days off following a period of 7 consecutive days duty, and
- (c) have 2 consecutive days off in any consecutive 14 days, and have at least 3 days off in any consecutive 14 days, and
- (d) have a minimum of 7 days off in any consecutive 4 weeks, and
  - (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 seventy hours over seven days, or sixty hours averaged over any two consecutive weeks. All types of duty, flight duty, ground duty, split duty, stand-by and positioning is counted in full for this purpose. Any period of seven or more consecutive days within which the flight crew member is employed on duties other than flight duties, flight watch or home reserve, standby, office duties or positioning is not included 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 paragraph 7 to 11 applicable to flight 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 crew members and contained in paragraph 7.1. In order to remove anomalies which might arise when cabin crew members and flight 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 crew start their flight duty period.

- (b) Rostered minimum rest periods must not be more than one hour shorter than those required by flight 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**

Records for the duty and rest periods of all flying staff shall include:

*For each crew member:*

The beginning, and duration of each duty and flying duty period, and function performed during the period.

Duration of each rest period prior to a flying duty or standby duty period.

Dates of days off.

Weekly totals of duty.

*For each flight crew member*

Daily and weekly flying hours

Records shall be preserved for at least 15 calendar months from the date of the last relevant entry.

Additionally, copies of all aircraft pilot-in-commands' discretion reports of extended flying duty periods and reduced rest periods will be retained for a period of at least fifteen months after the events.

### **14. Additional Limits On Helicopter Flying**

#### **(a) Repetitive Short Sectors**

Crew-flying repetitive short sectors, for example pleasure flying, off-shore short sector shuttles, at an average rate of 10 or more landings per hour, will have a break of at least 30 minutes away from the helicopter within any continuous period of 3 hours.

When carrying out the more demanding roles of helicopter flying, for example, winching and external load carrying, crews will have a break of (30) minutes away from the helicopter within any continuous period of 3 hours.

After 3 hours shuttle operations between offshore installations in conditions other than day VMC, a rest of 30 minutes free of all duty will be allowed.

**(b) Survival Suits**

The wearing of survival suits can prove an irritant and be uncomfortable. Therefore:

- (a) a flight crew member should not participate in moving freight or baggage, or any other activity requiring excessive physical efforts. His role should be supervisory.
- (b) schedules which involves continuous flying in excess of 4.5 hours will include provisions for a break free of all duty of at least 30 minutes, not including a total of 30 minutes for immediate post and pre-flight duties. The break will be scheduled prior to exceeding a total of 6 hours flying.

**127.03.1 TRAINING OF CREW MEMBERS**

**1. Training syllabus**

The training syllabus for flight crew members required in terms of CAR 127.03.1, is -

- (1) the syllabi prescribed in Parts 61 and 64, for initial training;
- (2) the syllabi prescribed in TS 127.03.3 and 127.03.10, for conversion training;
- (3) the syllabi prescribed in TS 127.03.4, 127.03.7, 127.03.13, 127.03.14 and 127.03.15 for differences and familiarisation training, recurrent training and checking and refresher training; and
- (4) the syllabi prescribed in Part 92 for initial and refresher dangerous goods training.

**127.03.3 CONVERSION TRAINING**

**1. Operator's type conversion training course syllabus**

- (1) An operator's type 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) crew resource management training;
  - (d) helicopter/flight simulator training and checking; and
  - (e) operational flying under supervision and operational check.
- (2) The conversion course must be conducted in the order set out in subparagraph (1) above.

## **2. Crew resource management training**

### **2.1 Procedures**

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

### **2.2 Objective and contents**

- (1) CRM is the effective utilisation of all available resources (e.g. crew members, helicopter 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 crew member concerned. The emphasis is placed on the non-technical aspects of 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, tiredness 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:
 

Notion of senergy	}	Inquiry (or explore, examine, scrutinise) Conflict resolution Decision making Critique Feedback
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  - (h) effective communication and co-ordination within the crew, and between crew members and other operational personnel (air traffic service, 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 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 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) is approved by the Director. An operator may use a course provided by another operator, if that course has already been approved.

### **127.03.7 PILOT QUALIFICATION TO OPERATE IN EITHER PILOT'S SEAT**

#### **1. Training**

- (1) A pilot-in-command required to operate in the co-pilot seat and carry out the duties of co-pilot, or a pilot-in-command required to conduct training or

examining duties from the co-pilot seat, must complete additional training and checking as specified in the operations manual, concurrent with the proficiency checks prescribed in CAR 127.03.7. This additional training must include at least the following:

- (a) An engine failure during take-off;
  - (b) a one-engine inoperative approach and go-around;
  - (c) a one-engine inoperative landing; and
  - (d) Category II or Category III operations, if applicable.
- (2) When engine-out manoeuvres are carried out in the helicopter, the engine failure must be simulated.
  - (3) When operating in the co-pilot seat, the checks required for operating in the pilot-in-command seat must, in addition, be valid and current.
  - (4) A pilot relieving as pilot-in-command, must demonstrate practice of drills and procedures, concurrent with the proficiency checks prescribed in CAR 127.03.7, which would otherwise have been the responsibility of the pilot-in-command. Where the differences between pilot-in-command and co-pilot seats are not significant (for example because of use of autopilot) then practice may be conducted in either seat.
  - (5) A pilot other than the pilot-in-command occupying the pilot-in-command seat, must demonstrate practice of drills and procedures, concurrent with the proficiency checks prescribed in CAR 127.03.7, which would otherwise have been the pilot-in-command's responsibility acting as pilot non-flying. Where the differences between pilot-in-command and co-pilot seats are not significant (for example because of use of autopilot) then practice may be conducted in either seat.

### **127.03.10 TYPE AND DIFFERENCES TRAINING**

#### **1. General**

The 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 in 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**

The 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**

The 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**

The 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**

The 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**

The 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**

The 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 pilot's checklists.

## **8. Safety equipment**

The 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**

The operator must ensure that training is given in the preparation of passengers for normal and emergency situations in accordance with CAR 127.08.25.

## **10. Crew resource management training**

The operator must ensure that the crew resource management training for cabin crew, is given in accordance with the current edition of ICAO Doc 7192-AN/857, Part E-1, "Training Manual: Cabin Attendants' Safety Training".

### **127.03.12 RECURRENT TRAINING**

#### **1. Aviation - general**

##### **1.1 Regulatory overview**

###### **1.1.1 Training objective**

The cabin crew member will be able to identify and describe the legislation relating to crew members.

###### **1.1.2 Syllabus**

- (1) Identify and describe the specific regulations applicable to crew members and cabin safety and outline the applicable operator's policies and procedures including -
  - (a) seatbelts and related restraint systems and electronic devices;

- (b) survival equipment, i.e. 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) crew stations;
- (i) infant (i.e. definition of);
- (j) minimum crew requirements;
- (k) passenger safety briefings;
- (l) emergency duties;
- (m) passenger safety briefing cards;
- (n) surface contamination training;
- (o) carry-on baggage;
- (p) journey log/cabin logbook (equivalent);
- (q) liquor/drugs;
- (r) refueling (fueling with one-engine running);
- (s) emergency equipment;
- (t) survival equipment;
- (u) duty period 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 helicopters 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 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 crew members as they apply to different helicopters the cabin crew member will be operating on.

#### 1.3.2 Syllabus

- (1) General
  - (a) Crew communication and crew coordination depend on each 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 apply:
    - (i) Cabin crew members must be in uniform; however they will be in addition to the minimum crew and will not be assigned any normal safety or cabin service duties;
    - (ii) each cockpit observation flight must 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 crew. Cabin crew members will observe the normal pre-flight pilot duties i.e. flight planning, weather briefing, flight crew briefing, pre-flight walk-around:
      - (1) Cockpit workloads and safety duties;
      - (2) crew communication procedures;

- (3) crew coordination procedures;
  - (4) cockpit layout;
  - (5) location of emergency equipment;
  - (6) location and operation of cockpit windows;
  - (7) location and operation of cockpit escape hatches;
  - (8) location of controls and operation of pilot and observer seats;
  - (9) location and operation of cockpit oxygen; and
  - (10) location of emergency checklists.
- (iv) Each cabin crew member must 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, i.e. 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 i.e. 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 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 Crew coordination**

##### **3.1.1 Training objective**

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

##### **3.1.2 Syllabus**

- (1) Describe the importance of crew coordination when applying approved procedures.
- (2) List the positive effects of crew coordination in enhancing flight safety.
- (3) Outline the benefits of 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 crew coordination especially in abnormal and emergency situations.

- (6) Discuss how poor crew coordination has contributed to aviation accidents and incidents and outline strategies to improve crew coordination.
- (7) Flight 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
- (3) 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.
- (4) Review how poor communication has contributed to aviation accidents and incidents and discuss ways to minimize these communication deficiencies.

### 3.3 **Surface contamination**

#### 3.3.1 Training objective

The cabin crew member will be able to define what is meant by surface contamination, describe his or her responsibilities and identify the procedures for reporting suspected surface contamination to the pilot-in-command.

#### 3.3.2 Syllabus

- (1) General
  - (a) Define surface contamination and hazards to flight associated with surface contamination.
  - (b) Define helicopter critical surfaces for each of the helicopter types in the operator's fleet.
  - (c) Identify an awareness of the conditions most likely to produce surface contamination.
  - (d) Give examples of visible signs of surface contamination, e.g. frost, ice, snow, including rain and clear, etc.

- (2) Cabin crew responsibilities
  - (a) Define the responsibilities of cabin crew members to report suspected surface contamination prior to take-off roll to the pilot-in-command as soon as it is discovered.
  - (b) State the requirement for the pilot-in-command or a person designated by the pilot-in-command to investigate reports of suspected surface contamination.
  - (c) Describe the advice to passengers whenever de-icing is taking place and who is responsible for this announcement.
- (3) De-icing
  - (a) Describe when the senior cabin crew member will be advised in adverse weather conditions whether or not de-icing will occur.
  - (b) Describe the different types of equipment used to accomplish de-icing. Example: cherry-picker, car wash, rope, etc.  
  
*Note: Use of video or photographic material is recommended.*
  - (c) Identify that icing conditions can recur on critical surfaces of the helicopter if the take-off is prolonged for any period of time after de-icing has occurred.
  - (d) Describe the possible hazards whenever de-icing is taking place, i.e. inhaling de-icing fluid, de-icing fluid entering cabin through open doorways, the presence of glycol fumes in the cabin. Identify the procedures to deal with these situations.

### 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 crew briefings, i.e. 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 helicopter 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 i.e. 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 passengers 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 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 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 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 in 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) Crew seating
- (a) Identify the persons authorised to occupy any of the 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, e.g. "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) Crew carry-on baggage
  - (a) Describe the policies and procedures for stowing crew baggage in the passenger cabin including accepting baggage from deadheading crew.
  - (b) Identify the 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 the helicopter.

### 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.
- (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.

#### 3.0.1 Syllabus

##### (1) Cabin crew responsibilities

- (a) Review the need for crew communication and whenever passenger service is being offered on the ground, i.e. 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.

### 3.1 Fueling with passengers on board

#### 3.1.1 Training objective

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

#### 3.2 Syllabus

##### (1) General

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

##### (2) Cabin crew responsibilities

- (a) Identify crew responsibilities and communication when fueling 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 crew communication and the decision to disembark passengers.

### 3.2 **Pre-take-off and pre-landing**

#### 3.2.1 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.

#### 3.2.2 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 and passenger safety checks.

### 3.3 **Rotor abnormalities**

#### 3.3.1 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.

#### 3.3.2 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 crew communication procedures associated with these rotor abnormalities.
  - (d) Outline the procedures for relocating passengers.
  - (e) Identify rotor abnormalities.

### 3.4 **Aerodrome safety**

#### 3.4.1 Training standard

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

#### 3.4.2 Syllabus

(1) Hazards on aerodromes

- (a) Identify the hazards associated with aerodromes, example: aerodrome/ground service traffic, noise and weather, foreign objects.
- (b) Describe the hazards associated with traffic on the aerodrome including helicopter movement, propellers, jet blast/exhaustion vehicles.

(2) Cabin crew responsibilities

- (a) Identify the established procedures and requirements for escorting passengers across the aerodrome.
- (b) Describe the coordination required between cabin crew members and ground staff to ensure passenger safety, i.e. stairs in place, props are secured and ways to achieve it.

(3) Operations

- (a) List the aerodrome 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 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 how this information is conveyed to cabin crew members.
- (e) Describe operational regulations differing from aeroplane operations.

### 3.5 **Turbulence**

#### 3.5.1 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.

#### 3.5.2 Syllabus

(1) General

- (a) Describe turbulence and the classification of turbulence, i.e. light, moderate, severe.

(A.I.P)

- (b) List the potential hazards to helicopters, crew and passengers in turbulence.

(2) Cabin crew responsibilities

- (a) Identify the importance of crew communication and 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.

### 3.6 Crew member incapacitation

#### 3.6.1 Training objective

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

#### 3.6.2 Syllabus

(1) General

- (a) Define what is meant by incapacitated crew member and identify possible causes, i.e. 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 crew members on different helicopters in the operator's fleet.
- (d) Identify how and where to secure an incapacitated crew member for landing or during periods of in-flight turbulence.
- (e) Identify the crew communication procedures to advise of crew member incapacitation including cockpit/cabin, senior cabin crew member/other crew members.

(2) Pilot incapacitation

- (a) Identify the assistance 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).

### 3.7 Post-flight duties

#### 3.7.1 Training objective

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

#### 3.7.2 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 crew change, identify the responsibility of the crew to brief the new cabin crew regarding any unserviceabilities, 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 aerodrome 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, i.e. fuel, heat, oxygen, chemical reaction.
- (e) List the classes of fire which may occur on helicopter 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 (i.e. what you will see, how the fire will behave) in different cabin environments, fire-propagation.



- (h) Describe the means of fire smoke detection, i.e. 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 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, e.g. 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, crew communication and 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 crew communication, 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/aerodrome fires;
  - (iv) fires on loading bridges; and
  - (v) service vehicle fires.
- (b) Describe established procedures for dealing with these fire situations including recognition, crew communication and 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) Crew responsibilities

- (a) List the 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, 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**

##### 4.2.1 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.

##### 4.2.2 Syllabus

(1) General

- (a) Identify the causes of each type of decompression (pressurisation loss), i.e. 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 crew members.
  - (d) Describe the effect of decompressions on any objects, persons in the immediate area.
  - (e) Describe the likely helicopter 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 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 crew communication procedures, i.e. signal for beginning a post-decompression walk-around, who is responsible for giving this signal and when it will be given.
  - (d) List the cabin crew member duties in a post-decompression walkaround and safety priorities.
  - (e) Identify the importance of crew coordination including passenger relocation during decompressions and methods of achieving this coordination.

### 4.3 Evacuations

#### 4.3.1 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.

#### 4.3.2 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 sur-vivability 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, i.e. structural damage, weight, centre of gravity, outside conditions.

- (e) Describe the different attitudes possible as a result of accidents/incidents, i.e. gear collapse, shift in centre of gravity. Include the effect of different helicopter attitudes on exit usability.
  - (f) Describe the effect of environmental conditions in evacuations, i.e. 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 aerodromes 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 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 crew members in evacuations.
  - (c) Describe the importance of 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 flight 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 helicopter; and
  - (vi) evacuation at an aerodrome.
- (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, i.e. 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, i.e. 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, i.e. 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, i.e. elderly, handicapped, passengers with guide animals.
- (j) Identify how cabin crew members can manage evacuations in adverse conditions, i.e. 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, i.e. 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, i.e. 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 objectives

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 objectives

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 objectives

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 O5 masks and spares.
- (d) Identify alternate procedures to access oxygen mask when the system fails.
- (e) Describe the crew communication procedures required to activate the oxygen system.



## 6.5 Heating and ventilation systems

### 6.5.1 Training objectives

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 crew communication and crew coordination procedures when using the heating and ventilation system.
- (c) Identify conditions that may occur in the cabin associated with the system, i.e. 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, e.g. inadvertent slide deployment, injury to 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 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, crew communication and crew coordination procedures.

- (b) Identify any precautions for ab-normal/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 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, e.g. 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

#### 7.2.1 Equipment criteria

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

#### 7.2.2 Performance criteria

Each cabin crew member will perform each of the following:

- (1) Pre-flight safety briefing to a special attention passenger (i.e. blind, physically disabled, unaccompanied minor);
- (2) individual briefing to an ABP (i.e. 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 (i.e. signs, seat belts, exits, oxygen, life jacket, floor level lighting, safety features card, etc.)

### 7.2.3 Evaluation criteria

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

- (1) completeness of briefing content (i.e. all relevant points included);
- (2) effective usage of communication techniques (i.e. 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 Helicopter operation drills for each helicopter type

### 7.2.1 Equipment criteria

- (1) Each drill will be performed using the appropriate helicopters or a simulator.
- (2) Individual helicopter exits may be substituted by an approved equivalent and as authorised 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 (i.e. clear of obstruction, fire, helicopter 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) (i.e. 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 (i.e. clear of obstruction, fire, helicopter 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) (i.e. 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) Acknowledgement and timely responses to signals;
- (2) assessment of the conditions outside the exit to determine exit usability (i.e. clear of obstruction, fire, helicopter 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) (i.e. slide disconnect, tailcone jettison, ventral stairs); and
- (10) correctly applies procedures (i.e. 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 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) helicopter attitude which will necessitate a decision to use the exit or redirect passengers;
  - (d) poor visibility (i.e. darkness, smoke);

- (e) incapacitated crew members;
- (f) exits which become unusable during the evacuation;
- (g) special needs passengers (i.e. elderly, handicapped);
- (h) passengers in panic (i.e. positive, negative, false leadership);
- (i) failure of helicopter emergency systems (i.e. lighting, evacuation signal, communication);
- (j) decompression; and
- (k) exits which require the use of non-standard “commands” (i.e. 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, (i.e. 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/simulator correctly;
  - (o) physically identify location of escape tapes or escape ropes; and

- (p) physically identify release handle(s) (i.e. 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 (i.e. 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 (i.e. clear of obstruction, fire, helicopter 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 (i.e. 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) (i.e. 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) Recognise 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/simulator.

#### 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 (i.e. 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 helicopter 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, (i.e. 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 (i.e. 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 in 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 (i.e. under seat, overhead bin, closet);
  - (b) galley area (i.e. garbage bin, upper electrical panel, oven);
  - (c) confined area (i.e. waste bin, lavatory); and
  - (d) hidden (i.e. 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 (i.e. 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 (i.e. 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 (i.e. tactile search, use of crash axe, etc.);
- (3) effective communication/coordination procedures throughout the drill (i.e. notifying fellow 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 (i.e. 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)

(Reserved.)

### 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, i.e. horizontal, vertical, recline; and
- (c) apply crew coordination and crew communication procedures to assist the remaining flight crew.

### NOTES ON CABIN CREW TRAINING STANDARD SYLLABUS

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 2 for a summary of training syllabus.
2. Where an "X" is shown instead of a "\$" provision is made for optional or guidance inclusion.

### 127.03.13 REFRESHER TRAINING

#### 1. Refresher training

The 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 a simulator;
- (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.

**127.03.14 CHECKING****1. Checking**

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

- (1) Initial training -
  - X The subjects referred to in CAR 64.02.3, as applicable;
- (2) Type and differences training -
  - X The subjects listed in TS 127.03.10; and
- (3) Recurrent training -
  - X The subjects listed in TS 127.03.12.

**127.04.3 OPERATIONS MANUAL****1. Structure 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 CARs.

Part 2 : Helicopter operating matters

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) An operator must ensure that the detailed structure of the operations manual is 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 CARs and with the terms and conditions of the applicable operating 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, crew training and ground operations. A description of their function 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 CARs.

- (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 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) competency 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 assurance system

A description of the quality control system adopted.

### 2.1.5 Crew composition

- (1) Crew composition

An explanation of the method for determining 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 crew requirement and flight time and duty period planned;
  - (e) experience (total and on type), recency and qualification of the 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 crew.
- (2) Designation of the pilot-in-command
- The rules applicable to the designation of the pilot-in-command.
- (3) Crew incapacitation
- Instructions on the succession of command in the event of 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 crew.
- (2) Flight 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 familiarisation flights.
  - (c) Operation on more than one type or variant.
- (4) Training, checking and supervision personnel
  - (a) For flight crew
  - (b) For cabin crew.



- (5) Other operations personnel.

#### 2.1.7 Crew health precautions

- (1) Crew health precautions

The relevant regulations and guidance to 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.

*Note: See Document NAM-CATS-MR.*

#### 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 127.02.14 as applicable to the operation.

- (2) Exceedances of 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

The method for establishing aerodrome operating minima for IFR flights in accordance with TS 127.08.11. 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 types;
  - (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) Flight plan

Procedures and responsibilities for the preparation and submission of the 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 helicopter journey log

The responsibilities and the use of the operator's helicopter journey log must be described, including samples of the format used.
- (l) List of documents, forms and additional information to be carried.
- (2) Ground handling instructions
  - (a) Fueling procedures

A description of fueling procedures, including -

    - (i) safety precautions during refueling and defueling including when an APU is in operation or when a turbine engine is running and the prop-brakes are on;
    - (ii) refueling and defueling 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 aerodrome, 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 aerodrome, 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) heavy precipitation;
- (vi) sand storms;
- (vii) mountain waves; and
- (viii) significant temperature inversions.

- (i) Wake turbulence

Wake turbulence separation criteria, taking into account helicopter types, wind conditions and runway location.

- (j) Crew members at their stations

The requirements for 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 crew and passengers

The requirements for 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 cockpit

The conditions for the admission to the cockpit of persons other than the flight crew.

- (m) Use of vacant crew seats

The conditions and procedures for the use of vacant crew seats.

- (n) Incapacitation of crew members

Procedures to be followed in the event of incapacitation of 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 fueling 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 CAR 91.08.24.
- (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) Non revenue flights
- Procedures and limitations for -
- (a) training flights;
  - (b) test flights;
  - (c) delivery flights;
  - (d) ferry flights;
  - (e) demonstration flights; and
  - (f) positioning flights,
- including the kind of persons who may be carried on such flights.
- (7) Oxygen requirements
- (a) An explanation of the conditions under which oxygen must be provided and used.
  - (b) The oxygen requirements specified for -
    - (i) flight 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 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 aircraft;
- (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 or prohibited 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;
- (3) types of operation that are approved (e.g. IFR/VFR, CAT II/III, flights in known icing conditions, etc.);
- (4) crew composition;
- (5) mass and centre of gravity;
- (6) speed limitations;
- (7) flight envelope(s);
- (8) wind limits;
- (9) performance limitations for applicable configurations;
- (10) airframe contamination; and
- (11) system limitations.



### 2.2.3 Normal procedures

The normal procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists and a statement covering the necessary coordination procedures between flight crew and 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; and
- (13) post landing.

### 2.2.4 Abnormal and emergency procedures

The abnormal and emergency procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists and a statement covering the necessary coordination procedures between flight crew and cabin crew. The following abnormal and emergency procedures and duties must be included:

- (1) 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 Director 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. Flights to isolated aerodromes must be included.

- (2) The method for calculating fuel needed for the various stages of flight in accordance with TS 127.08.16.

#### 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.

#### 22.4 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 a helicopter is being despatched under the terms of its CDL.

#### 2.2.5 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.

#### 2.2.6 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 checklist(s) must also be included.
- (2) The procedure for determining the amount of oxygen required and the quantity that is available. The flight profile and number of occupants must be considered. The information provided must be in a form in which it can be used without difficulty.

#### 2.2.7 Emergency evacuation procedures

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

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

#### 2.2.8 Helicopter systems

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

### 2.3 PART 3: ROUTE AND AERODROME 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) 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 categorisation for crew competency qualification.

#### 2.4 PART 4 : TRAINING

- (1) Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight.
- (2) Training syllabi and checking programmes must include:
  - (a) For flight crew  
All relevant items prescribed in Part 61 and Subpart 3 of Part 127;
  - (b) For cabin crew  
All relevant items prescribed in Part 64 and Subpart 3 of Part 127;
  - (c) For operations personnel concerned, including crew members:
    - (i) All relevant items prescribed in Part 92; and
    - (ii) all relevant items regarding operator security.
  - (d) For operations personnel other than 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.

### 3. General

The operations manual must be drawn up in accordance with ICAO Doc 9376-AN/914, "Preparation of an Operations Manual", 1<sup>st</sup> edition, 1990.

#### 127.04.4 HELICOPTER JOURNEY LOG

##### 1. Information to be contained in helicopter journey log

- (1) The information to be retained in the helicopter journey log will include the following:
  - (a) Aeroplane Registration;
  - (b) Date;
  - (c) Name(s) of crew member(s);
  - (d) Duty assignments of crew member(s);
  - (e) Place of departure;
  - (f) Place of arrival;
  - (g) Time of departure (off-block time);
  - (h) Time of arrival (on-block time);
  - (i) Hours of flight;
  - (j) Nature of flight
  - (k) Incidents, observations (if any) and;
  - (l) Pilot-in-command's signature.
- (2) The operator must ensure that all entries are made concurrently and that they are permanent in nature.

#### 127.04.6 OPERATIONAL FLIGHT PLAN

##### 1. Items in operational flight plan

- (1) An operator must ensure that the operational flight plan used and the entries made during flight contain the following items:
  - (a) Helicopter registration;
  - (b) helicopter type and variant;
  - (c) date of flight;
  - (d) flight identification;
  - (e) names of crew members;
  - (f) duty assignment of crew members;
  - (g) place of departure;
  - (h) time of departure (actual off-block time, take-off time);
  - (i) place of arrival (planned and actual);
  - (j) time of arrival (actual landing and on-block time);
  - (k) type of operation (ETOPS, VFR, ferry flight, etc.);
  - (l) route and route segments with checkpoints/waypoints, distances, time and tracks;
  - (m) planned cruising speed and flying times between check-points/waypoints. Estimate and actual times overhead;

- (n) safe altitudes and minimum levels;
  - (o) planned altitudes and flight levels;
  - (p) fuel calculations (records of in-flight fuel checks);
  - (q) fuel on board when starting engines;
  - (r) alternate(s) for destination and, where applicable, take-off and *en route*, including information required in subparagraphs (l), (m), (n) and (o) above;
  - (s) initial flight plan clearance and subsequent re-clearance;
  - (t) in-flight re-planning calculations; and
  - (u) relevant meteorological information.
- (2) Items which are readily available in other documentation or from an acceptable source, or which are irrelevant to the type of operation, may be omitted from the operational flight plan.
- (3) The operator must ensure that the operational flight plan and its use is described in the operations manual.
- (4) The operator must ensure that all entries in the operational flight plan are made concurrently and that they are permanent in nature.

#### **127.04.7 FLIGHT PLAN**

##### **1. Items in a flight plan**

- (1) A flight plan filed prior to departure must contain the following items:
- (a) Helicopter identification and transponder data;
  - (b) flight rules and type of flight;
  - (c) number and type(s) of helicopter(s) and wake turbulence category;
  - (d) radio communication, navigation and approach-aid equipment;
  - (e) aerodrome of departure and time;
  - (f) flight information region boundaries and estimated times;
  - (g) cruising speed and flight level;
  - (h) route to be followed;
  - (i) destination aerodrome and estimated times of arrival;
  - (j) alternate aerodrome(s);
  - (k) alerting action required;
  - (l) fuel endurance;
  - (m) total number of persons on board;
  - (n) emergency and survival equipment and colour of helicopter;

- (o) other pertinent information; and
  - (p) name, postal address, telephone and telefax number of the operator or pilot-in-command of the helicopter which must be completed in field 18 of the standard flight plan form.
- (2) A flight plan filed in flight to comply with CAR 127.04.7(6) must contain the following items:
- (a) Helicopter registration;
  - (b) flight rules;
  - (c) type of helicopter;
  - (d) aerodrome of departure;
  - (e) cruising speed and flight level;
  - (f) route to be followed and estimates as applicable;
  - (g) destination aerodrome and estimated time of arrival;
  - (h) alternate aerodrome for IFR flights;
  - (i) alerting action required;
  - (j) fuel endurance if alerting action required;
  - (k) total number of persons on board; and
  - (l) name, postal address, telephone and telefax number of the operator or pilot-in-command of the helicopter.

### 127.04.13 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 TS 127.01.5.

### 127.04.15 DOCUMENT STORAGE PERIODS

An operator shall ensure that the following information/documentation is stored in an acceptable form accessible to the Director, for the periods shown in the table below.

*Note: Additional information relating maintenance records is prescribed in Subpart 10.*

**Table 1 - Information used for the Preparation and execution of a flight**

Information used for the preparation and execution of the flight as described in CAR 127.04.6	
Operational flight plan	3 months
Aeroplane Technical Log	24 months after the date of the last entry
Route specific NOTAM/AIS briefing documentation edited by the operator	3 months
Mass and balance documentation	3 months
Notification of special loads including dangerous goods	3 months

**Table 2 - Reports**

Reports	
Journey Log	3 months
Flight report(s) for recording details of any occurrence, as prescribed in CAR 127.04.4, or any event which the commander deems necessary to report/record	3 months
Reports on exceedances of duty and/or reducing rest periods	3 months

**Table 3 - Flight crew records**

Flight crew Reports	
Flight, duty and rest time	15 minutes
Licence	As long as the flight crew member is exercising the privileges of the licence for the operator
Conversion training and checking	3 years
Command course (including checking)	3 years
Recurrent training and checking	3 years
Training and checking to operate in either pilot's seat	3 years
Recent experience	15 months
Route and aerodrome competence	3 years
Dangerous goods training as appropriate	3 years

**Table 4 - Cabin crew records****Table 5 - Records for other operations personnel**

Records for other operations personnel	
Training/qualification records of other personnel for whom an approved training programme is required by Part 127	Last 2 training records

**Table 6 - Other records**

Other records	
Quality system records	5 years

**127.04.17 TECHNICAL LOG****1. Information to be contained in a technical log**

- (1) The following information for each flight must be contained in the technical log:
  - (a) Helicopter registration;



- (b) date;
  - (c) names(s) of crew member(s);
  - (d) duty assignment of crew member(s);
  - (e) place of departure;
  - (f) place of arrival;
  - (g) time of departure (off-block time);
  - (h) time of arrival (on block-time);
  - (i) hours of flight;
  - (j) nature of flight;
  - (k) incidents, observations (if any);
  - (l) signature of pilot-in-command;
  - (m) the current maintenance statement giving the helicopter maintenance status of what maintenance, scheduled or out of phase, is next due;
  - (n) all outstanding deferred defects which affect the operation of the helicopter;
  - (o) fuel used; and
  - (p) fuel uplift.
- (2) The operator or pilot-in-command need not keep a technical log or part thereof, if the relevant information is available in other documentation.
- (3) The operator must ensure that all entries are made concurrently and that they are permanent in nature.

#### **127.05.10 FLIGHT RECORDER**

##### **1. Flight recorder specifications**

All digital flight recorders must comply with one of the following specifications as applicable:

- (1) ARINC 542A
- (2) ARINC 573-717
- (3) ARINC 717
- (4) ICAO.

#### **127.05.12 COCKPIT VOICE RECORDER**

##### **1. Types of helicopters**

- (1) A helicopter with a maximum certificated mass exceeding 2 730 kilograms and to which an individual certificate of airworthiness was first issued on or after 1 April 1998.

- (2) A helicopter with a maximum certificated mass exceeding 7 000 kilograms, or a maximum approved passenger seating configuration of more than nine seats, to which an individual certificate of airworthiness was first issued up to and including 1 April 1998.

### **127.05.13 FLIGHT DATA RECORDER**

#### **1. Types of helicopters**

(Reserved.)

### **127.05.20 STANDARD FIRST AID KIT**

#### **1. Standard first aid kits**

- (1) The following must be included in the first aid kit:
- (a) Bandage (unspecified);
  - (b) burns dressings (unspecified);
  - (c) wound dressings, large and small;
  - (d) adhesive tape, safety pins and scissors;
  - (e) small adhesive dressings;
  - (f) antiseptic wound cleaner;
  - (g) adhesive wound closures;
  - (h) adhesive tape;
  - (i) disposable resuscitation aid;
  - (j) simple analgesic e.g. paracetamol;
  - (k) antiemetic e.g. cinnarizine;
  - (l) nasal decongestant;
  - (m) first aid handbook;
  - (n) splints, suitable for upper and lower limbs;
  - (o) gastrointestinal antacid +;
  - (p) anti-diarrhoeal medication e.g. loperamide +;
  - (q) ground/air visual signal code for use by survivors;
  - (r) disposable glove; and
  - (s) a list of contents. This should include information on the effects and side effects of drugs carried.

**Note: 1.** *An eye irrigator whilst not required to be carried in the first aid kit should, where possible, be available for use on the ground.*

**2.** *+ indicates helicopters with more than 9 passenger seats installed.*

- (2) Unless the standard first aid kit is clearly visible, its location must be indicated by a placard or sign, and appropriate symbols may be used to supplement the placard or sign.
- (3) The operator or pilot-in-command must ensure that the standard first aid kit is readily accessible for use.
- (4) A helicopter must be equipped with the following number of standard first aid kits:

Number of passenger seats installed	Number of standard first aid kits required
0 to 99	1
100 to 199	2
200 to 299	3
300 and more	4

### **127.05.21 SUPPLEMENTAL OXYGEN IN CASE OF NON-PRESSURED HELICOPTER**

#### **1. General**

- (1) The operator or pilot-in-command may not operate a non-pressurised helicopter at altitudes above 10 000 feet, unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required, is provided.
- (2) The amount of supplemental oxygen for sustenance required for a particular operation must be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures established for each operation in the operations manual and with the routes to be flown, and with the emergency procedures specified in the operations manual, if applicable.
- (3) A helicopter intended to be operated above 10 000 feet, must be provided with equipment capable of storing and dispensing the oxygen supplies required.

#### **2. Oxygen supply requirements**

- (1) Flight crew members

Each flight crew member on duty in the cockpit must be supplied with supplemental oxygen in accordance with paragraph 3. If all occupants of cockpit seats are supplied from the flight crew source of oxygen supply, they are to be considered as flight crew members on cockpit duty for the purpose of oxygen supply.

- (2) Cabin crew members, additional crew members and passengers

Cabin crew members and passengers must be supplied with oxygen in accordance with paragraph 3. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, are to be considered as passengers for the purpose of oxygen supply.