



CHAPTER 7

HELICOPTER FLIGHT CREW

7.1 COMPOSITION OF THE FLIGHT CREW

7.1.1 The number and composition of the flight crew shall not be less than that specified in the operations manual. The flight crews shall include flight crew members in addition to the minimum numbers specified in the flight manual or other documents associated with the certificate of airworthiness, when necessitated by considerations related to the type of helicopter used, the type of operation involved and the duration of flight between points where flight crews are changed.

7.1.2 The flight crew shall include at least one member authorized by the DG, CAAN to operate the type of radio transmitting equipment to be used.

Note.— Some States have dispensed with the system of issuing radio licences.

7.2 FLIGHT CREW MEMBER EMERGENCY DUTIES

An operator shall, for each type of helicopter, assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation. Annual training in accomplishing these functions shall be contained in the operator's training programme and shall include instruction in the use of all emergency and life-saving equipment required to be carried, and drills in the emergency evacuation of the helicopter.

7.3 FLIGHT CREW MEMBER TRAINING PROGRAMMES

7.3.1 An operator shall establish and maintain a ground and flight training programme, approved by the DG, CAAN, which ensures that all flight crew members are adequately trained to perform their assigned duties. The training programme shall:

- a) include ground and flight training facilities and properly qualified instructors as determined by the DG, CAAN;
- b) consist of ground and flight training for the type(s) of helicopter on which the flight crew member serves;
- c) include proper flight crew coordination and training for all types of emergency and abnormal situations or procedures caused by engine, transmission, rotor, airframe or systems malfunctions, fire or other abnormalities;



- d) include training in knowledge and skills related to the visual and instrument flight procedures for the intended area of operation, human performance and threat and error management, the transport of dangerous goods and, where applicable, procedures specific to the environment in which the helicopter is to be operated;
- e) ensure that all flight crew members know the functions for which they are responsible and the relation of these functions to the functions of other crew members, particularly in regard to abnormal or emergency procedures;
- f) shall include knowledge and skills related to the operational use of head-up display and/or enhanced vision systems for those helicopters so equipped; and
- g) be given on a recurrent basis, as determined by the DG, CAAN and shall include an examination to determine competence.

Note 1.— Paragraph 2.2.5 prohibits the in-flight simulation of emergency or abnormal situations when passengers or cargo are being carried.

Note 2.— Flight training may, to the extent deemed appropriate by the DG, CAAN, be given in flight simulation training devices approved by the DG, CAAN for that purpose.

Note 3.— The scope of the recurrent training required by 7.2 and 7.3 may be varied and need not be as extensive as the initial training given in a particular type of helicopter.

Note 4.— The use of correspondence courses and written examinations as well as other means may, to the extent deemed feasible by the DG, CAAN, be utilized in meeting the requirements for periodic ground training.

Note 5.— Provisions for training in the transport of dangerous goods are contained in Annex 18.

Note 6.— Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual (Doc 9683).

Note 7.— Information for pilots and flight operations personnel on flight procedure parameters and operational procedures is contained in PANS-OPS (Doc 8168), Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS (Doc 8168), Volume II. Obstacle clearance criteria and procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons.

Note 8.— Guidance material to design flight crew training programmes can be found in the manual Preparation of an Operations Manual (Doc 9376).

Note 9.— Guidance material on the different means used to assess competence can be found in the Attachment to Chapter 2 of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

7.3.2 The requirement for recurrent flight training in a particular type of helicopter shall be considered fulfilled by:

- a) the use, to the extent deemed feasible by the DG, CAAN, of flight simulation training devices approved by the DG, CAAN for that purpose; or



- b) the completion within the appropriate period of the proficiency check required by 7.4.4 in that type of helicopter.

7.4 QUALIFICATIONS

Note.— See the Manual of Procedures for Establishment and Management of a State's Personnel Licensing System (Doc 9379) for guidance of a general nature on cross-crew qualification, mixed-fleet flying and cross-credit.

7.4.1 Recent experience — pilot-in-command and co-pilot

7.4.1.1 An operator shall not assign a pilot-in-command or a co-pilot to operate at the flight controls of a type or variant of a type of a helicopter during take-off and landing unless that pilot has operated the flight controls during at least three take-offs and landings within the preceding 90 days on the same type of helicopter or in a flight simulator approved for the purpose.

7.4.1.2 When a pilot-in-command or a co-pilot is flying several variants of the same type of helicopter or different types of helicopter with similar characteristics in terms of operating procedures, systems and handling, the DG, CAAN shall decide under which conditions the requirements of 7.4.1.1 for each variant or each type of helicopter can be combined.

7.4.2 Pilot-in-command operational qualification

7.4.2.1 An operator shall not utilize a pilot as pilot-in-command of a helicopter on an operation for which that pilot is not currently qualified until such pilot has complied with 7.4.2.2 and 7.4.2.3.

7.4.2.2 Each such pilot shall demonstrate to the operator an adequate knowledge of:

- a) the operation to be flown. This shall include knowledge of:
- 1) the terrain and minimum safe altitudes;
 - 2) the seasonal meteorological conditions;
 - 3) the meteorological, communication and air traffic facilities, services and procedures;
 - 4) the search and rescue procedures; and
 - 5) the navigation facilities and procedures associated with the route or area in which the flight is to take place; and
- b) procedures applicable to flight paths over heavily populated areas and areas of high air traffic density, obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, and applicable operating minima.

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



7.4.2.3 A pilot-in-command shall have made a flight, representative of the operation with which the pilot is to be engaged which must include a landing at a representative heliport, as a member of the flight crew and accompanied by a pilot who is qualified for the operation.

7.4.2.4 The operator shall maintain a record, sufficient to satisfy the State of the Operator of the qualification of the pilot and of the manner in which such qualification has been achieved.

7.4.2.5 An operator shall not continue to utilize a pilot as a pilot-in-command on an operation unless, within the preceding 12 months, the pilot has made at least one representative flight as a pilot member of the flight crew, or as a check pilot, or as an observer on the flight deck. In the event that more than 12 months elapse in which a pilot has not made such a representative flight, prior to again serving as a pilot-in-command on that operation, that pilot must requalify in accordance with 7.4.2.2 and 7.4.2.3.

7.4.3 Pilot proficiency checks

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

Note.— Flight simulation training devices approved by the State of the Operator may be used for those parts of the checks for which they are specifically approved.

7.4.3.2 When an operator schedules flight crew on several variants of the same type of helicopter or different types of helicopters with similar characteristics in terms of operating procedures, systems and handling, the Director General shall decide under which conditions the requirements of 7.4.3.1 for each variant or each type of helicopter can be combined.

7.5 FLIGHT CREW EQUIPMENT

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

7.6 FLIGHT TIME, FLIGHT DUTY PERIODS AND REST PERIODS

7.6.1 Flight and Duty Time Limitations

7.6.1.1 An operator shall not cause or permit any person to fly as a member of the crew of an Helicopter if he knows or has any reason to believe that person is suffering from fatigue to the extent that the safety of the Helicopter would be endangered.



7.6.1.2 Flight time and duty period limitations are established for the purpose of reducing the probability that fatigue of members of the crew of an Helicopter may adversely affect the safety of flight. The primary concern is in relation to members of the flight crew, but it must be recognized that a cabin attendant who is suffering from fatigue, may, if an emergency occurs, fail in his assigned emergency duty.

7.6.1.3 To prevent the occurrence of cumulative fatigue because of inadequate periods for recuperation after the occurrence of, in particular, transient fatigue, minimum rest periods need to be established between successive periods of duty.

7.6.1.4 An operator shall formulate rules to limit flight time and flight duty periods and for the provision of adequate rest periods for all its crew members. These rules shall be in accordance with the regulations established or approved by Civil Aviation Authority of Nepal, and included in the operations manual. Flight times and duty periods so specified by operators shall not be longer than the maximum times specified in these Requirements and the rest periods shall not be less than the minimum times specified herein.

7.6.2 Flight time and duty period records

The holder of an Air Operator Certificate issued by the Director General shall maintain current records of the duration of duty periods and of the flight time of each of the crew member in a form approved by the Director General, such record shall be retained for a period of 12 months for the inspection by the Director General as may be required.

7.6.3 Flight Time, Flight Duty Periods And Rest Periods

7.6.3.1 The Operator shall specify for approval by Director General, Civil Aviation Authority of Nepal the limitations applicable to the flight time and flight duty periods for flight crew members. These specification shall also make provision for adequate rest periods and shall be such as to ensure that fatigue occurring either in a flight or successive flights or accumulated over a period of time due to these and other tasks does not endanger the safety of a flight.

7.6.3.2 Flight Crew Limitations:

7.6.3.2.1 Single pilot operations

- a) The maximum duty period in any period of 24 hours for a pilot engaged in single pilot operation shall be 12 hours of which not more than 7 hours flight duty period.
- b) In a particular instance when the pilot's flight duty period exceeds 7 hours but does not exceed 8 hours, he shall be removed from all flight duties the following day regardless of the number of previous days that he has flown.
- c) The minimum rest period between two consecutive flight duty periods shall be 9 hours, and if the preceding duty period was 10 hours or more, it shall not be less than 10 hours. Any period between two consecutive flight duty periods which is



spent at place where there is no facility for supine rest shall not qualify as a rest period.

7.6.3.2.2 Two pilot operations

- a) The maximum duty period in any period of 24 hours for pilots engaged in two-pilot operation shall be 13 hours of which not more than 9 hours may be flight duty period.
- b) The minimum rest period between two consecutive duty periods shall be 9 hours and if the preceding flight duty period was 11 hours or more, it shall not be less than 10 hours. Any period between two consecutive flight duty periods which is spent at a place where there is no facility for prone rest shall not qualify as a rest period.
- c) When a Flight Engineer is also involved as a part of the flight crew, the limitations of para 7.6.3.2.2 a) shall apply.

7.6.4 Relaxation of limitations

- a) Where an operator has established flight time and duty period limitations which are more restrictive than those specified in this directive, pilots-in-command may be authorized by the operator to extend flight times and duty periods up to the limits of those specified in this directive subject to such conditions as the operator may establish.
- b) A pilot-in-command of an aircraft may be authorized to exceed the limits specified in this directive if in his judgement it is safe to do so for the following purposes :
 - i) search and rescue action;
 - ii) provisions of relief in cases of distress; and
 - iii) completion of a flight which unforeseen operational conditions has extended beyond the limitations.
- c) Whenever flight times or duty periods exceed the limitations specified, the pilot-in-command and the operator shall submit a report in writing to the Director General.
- d) Reduction of the rest periods specified in this directive to facilitate either (i) search and rescue action; or (ii) provision of relief in cases of distress shall be subject to the prior approval of the Director General.

7.6.5 Rest Period

7.6.5.1 An operator shall establish for flight crew members a minimum rest period that allows them to obtain:

- a) adequate rest prior to flight duty time, calculated by taking into account the number and type of flight crew member duties that precede and follow the rest period and ;



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- b) at least one rest period of not less than 24 consecutive hours, which should include two nights, once within each seven-day period; the preceding six days to include both those days when flight duties or airport standby duties have been performed;

7.6.6 Cumulative Hours

Members of flight crew and cabin crew shall not fly:

- more than 100 hours in any period of one calendar month,
- more than 290 hours in any period of three consecutive months,
- more than 1000 hours in any period of twelve consecutive months.