



GOVERNMENT OF INDIA

OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION

TECHNICAL CENTER, OPP SAFDURJUNG AIRRPORT,
NEW DELHI

**CIVIL AVIATION REQUIRIMENTS
SECTION 7 – FLIGHT CREW STANDARDS
SERIES 'J' PART II
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SUBJECT: - FLIGHT AND DUTY TIME LIMITS FOR HELICOPTER FLIGHT CREW

1. INTRODUCTION

- 1.1. ICAO Annex 6 Part III lays down the standards and recommended practices for management of fatigue for flight and cabin crew members. These standards require State of the Operator to establish prescriptive regulations for the management of fatigue which include flight time, flight duty periods, duty period and rest period limitations. The Operator, for the purpose of managing its fatigue related safety risks, is required to establish flight time, flight duty periods, duty period and rest period limitations that are within the prescriptive fatigue management regulations established by the State.
- 1.2. This Civil Aviation Requirements (CAR) is issued under the provisions of Rule 42A and Rule 133A of the Aircraft Rules, 1937 and lays down the prescriptive Fatigue management regulations in respect of flight crew members engaged in commercial and general aviation helicopter flying. The CAR also lays down the responsibility of the Operator for the purpose of management of its fatigue related safety risks.

2. **APPLICABILITY**

- 2.1. The flight time, flight duty time, number of landings and rest period requirements contained in this CAR shall be applicable to operators of and flight crew engaged in all helicopter operations in India.

3. **DEFINITIONS**

- 3.1. Calendar Day. A 24 hours period commencing at 0000 hrs local time.
- 3.2. Days Off. Periods available for leisure and relaxation free from all duties. A single day off shall include 02 local nights. Consecutive days off shall include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.
- 3.3. Deadheading crew. A crew member positioned by the operator in flight or by surface transport.
- 3.4. Duty. Any task that flight crew members are required by the operator to perform , including for example , flight duty transit time , administrative work, training , positioning and standby when it is likely to induce fatigue.
- 3.5. Duty Period. The time during which a flight crew member carries out any duty at the behest of the flight crew member's employer.
- 3.6. Fatigue. A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness, circadian phase, or workload (mental and/or physical activity) that can impair a crew member's alertness and ability to safely operate an aircraft or perform safety related duties.
- 3.7. Transient fatigue. Transient fatigue may be described as fatigue which is normally experienced by a healthy individual following a period of work, exertion or excitement, and it is normally dispelled by a single sufficient period of sleep.
- 3.8. Cumulative Fatigue. Cumulative fatigue is defined as that fatigue that may occur after delayed or incomplete recovery from transient fatigue or as the after-effect of more than a normal amount of work, exertion or excitement without sufficient opportunity for recuperation.
- 3.9. Circadian fatigue. Circadian fatigue refers to the reduced performance during night time hours, particularly during an individual's "window of circadian low" (WOCL) (typically between 2:00 a.m. and 05:59 a.m).
- 3.10. Flight by night. Flight by night for the purpose of this CAR, except where otherwise stated, means a flight performed between the period of half an hour after sunset and half an hour before sunrise.

- 3.11. Flight Duty Period. The total time from the moment a flight crew member commences duty, immediately subsequent to a rest period and prior to making a flight or a series of flights, to the moment the flight crew member is relieved of all duties having completed such flight or series of flights. It shall be a minimum of 45 minutes before the first planned departure and 30 minutes after final arrival.
- 3.12. Flight Sector. A flight or one of a series of flights which commences at a parking place of the aircraft and terminates at a parking place of the aircraft. It is composed of:
- a) Flight preparation,
 - b) Flight time,
 - c) Post-flight period after the flight sector or series of flight sectors.
- 3.13. Flight Time (Helicopters). The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.
- 3.14. Home base. The geographical location decided between the Operator and the aircrew at the time of the employment and duly recorded in the employment letter.
- 3.15. Local night. A period of eight hours falling between 22.00 and 08.00 local time.
- 3.16. Rest period. Any period of time on the ground during which a flight crew member is relieved of all duties by the operator.
- 3.17. Series of flights. Two or more flight sectors accomplished in between two rest periods.
- 3.18. Standby. A defined period during which a crew member may be called for duty with minimum notice and such standby duty will be counted in the Flight Duty Period.
- 3.19. Split Duty (Break). means a period free of all duties, which counts as duty, being less than a rest period..
- 3.20. Suitable Accommodation. A quiet ventilated and comfortable place having facility to control levels of light and temperature and not open to public.
- 3.21. Turnaround time. The time spent on the ground during a flight duty period between two flight sectors.
4. **OPERATOR'S RESPONSIBILITY**

- 4.1. . Every operator shall establish a scheme for complying with the limitations for flight time, flight duty periods, duty periods and rest periods specified in this CAR in respect of flight crew members
- 4.2. DGCA may approve, in exceptional circumstances, variations to these regulations on the basis of a risk assessment provided by the operator. Approved variations shall provide a level of safety equivalent to, or better than, that achieved through the prescriptive fatigue management regulations specified in this CAR.
- 4.3. The scheme along with any variations shall be included in the operations manual and submitted to the Director-General for approval.
- 4.4. The operator shall not require a flight crew member to operate a helicopter if it is known or suspected that the flight crew member is fatigued to the extent that the safety of flight may be adversely affected.
- 4.5. No certificate holder may schedule any flight crew member and no flight crew member may accept an assignment, which shall exceed the prescribed limitations.
- 4.6. Operators shall ensure that persons concerned with the operations are trained and educated regarding dangers of fatigue, the causes of and importance of sleep and proper sleep habits.

5. **FLIGHT CREW MEMBER'S RESPONSIBILITY**

- 5.1. A flight crew member shall not operate a helicopter when he or she knows that he or she is fatigued or feels unfit to the extent that the safety of flight may be adversely affected.
- 5.2. Flight crew members shall make best use of facilities and opportunities that are provided for rest and for the consumption of meals and shall plan and use rest periods to ensure that they are fully rested.

6. **FLIGHT AND DUTY PERIOD LIMITATIONS**

- 6.1. The following limitations regarding maximum flight duty time and flight time shall be observed:
 - a) Maximum Flight Duty Time.
 - (i) In one calendar day - 10 hrs.
 - (ii) In any seven consecutive days - 60 hrs.

Note.- The limit given in (a) above may be extended to 12 hrs, but not more than 03 times in any period of 28 consecutive days.

b) Maximum Flight Time.

- (i) In one calendar day - 07 hrs.
- (ii) In any seven consecutive days - 30 hrs.
- (iii) In any 28 consecutive days - 100 hrs.
- (iv) In one year (i.e. any consecutive 365 days) 1000 hrs.

Note 1: Maximum Flight time in one day in case of single pilot operations/ aerial work must not exceed 06 hours.

Note 2. The maximum flight time in one day in case of twin pilot operations may be exceeded to 08 hrs upto a maximum of 03 times in any period of 28 consecutive days. These limits will not be exceeded on consecutive days.

Note 3. In extreme emergency or lifesaving missions, the Flight/Duty Time Limitations may be exceeded. However, the crew will be provided additional rest of 1 hour for every 30 minutes of Flight Duty Time in excess of 12 hours. All such cases shall be subsequently reported by the operator to the DGCA (Director of Air Safety) with necessary justification.

6.2. Maximum Landings. Pilots flying repetitive short sectors, for example off shore sector shuttles and hill operations at an average rate of 10 or more landings per hour , shall have a break of at least 30 minutes away from the helicopter within any continuous period of 03 hours. Maximum number of landings in one day i.e 24 consecutive hours shall not exceed 60. The record of all landing made by the crew shall be maintained.

7. **DAYS OFF**

7.1. Whenever possible, and if required by the flight crew, days off will be taken in the home environment. A single day off for helicopter crew shall include two local nights. A planned rest may be included as part of a day off.

7.2. In Station (Home Base).

- a) Minimum one day 'OFF' shall be provided in a period of any 07 consecutive days.
- b) Minimum 03 Days 'OFF' shall be provided in any 14 consecutive days, in case the duty period is extended beyond 7 days without a break.

7.3. Out Station (Away From Home Base).

a) Where the duty schedule from home base operations as in para 7.2 above is not applicable then leave at home location as per details below is to be provided:-

(i) At least 50% of days on outstation operations shall be provided as 'Off Duty' at home base. This provision is applicable only after 06 days of continuous outstation duty without a break.

(ii) The maximum time on outstation operation shall not exceed 42 days at a stretch.

8. **REST PERIOD**

8.1. A minimum rest period of 10 consecutive hours encompassing the period 2300 hours to 0500 hours be provided to all the helicopter pilots. This period shall be extended to 11 hours if the period from 2300 hours to 0500 hours is not fully included there in.

8.2. Split Duty (Break).

Consecutive hours of break	Maximum extension of the FDP
Less than 04 H	NIL
Between 04 H and 10 H	A period equal to half the consecutive hours break taken
>10H	No extension permitted.

a) Post – flight and pre –flight duties will not be counted as part of rest.

b) If the break is 4 or more consecutive hours, then operator will provide suitable accommodation.

c) Parts of the FDP before and after the break shall not exceed ten hours.

9. **MIXED DUTIES**

9.1. Whenever a pilots is required to report for duty in advance of the stipulated reporting time for a flight to carry out any other task at the behest of an operator, then the time spent on the task shall be part of subsequent flight duty period.

9.2. Whenever a pilot is required to carry out additional tasks/ training at the behest of operator, before or after flight then the time spent on the task shall be part of the flight duty period.

9.3. Whenever a pilot flies any simulator either on check or training flight as an instructor /training captain /examiner , all the time spent in simulator including 'pre' and 'post' briefing shall count towards 'Flight Duty Period' and the time logged in the simulator will count towards maximum FTL for the day. For the purpose of Flight Duty Period, minimum time for 'post' and 'pre' flight briefing for simulator flying shall be taken as total of one hour.

9.4. If flying is carried out in two or more different types of aircraft or operations having different flight / duty timings, the more restrictive flight and duty time limitations shall apply.

10. **ADDITIONAL LIMITS ON 'FLIGHT BY NIGHT'**

10.1. Sleep deprivation, leading to the onset of fatigue, can arise if a crew member is required to do night flying on a number of consecutive days. Therefore, not more than 03 consecutive night flying duties can be undertaken without giving the next consecutive 48 hours free from all duties.

11. **DEADHEADING**

11.1. All the time spent on deadheading immediately preceding a flight without any intervening rest period on the behest of the operator shall be counted as duty and be a part of the Flight Duty Period.

12. **RECORDS**

12.1. To enable the operator to ascertain that the fatigue management system is functioning as intended and as approved, backup records shall be kept for 18 months of the duties performed and rest periods provided so as to facilitate inspection by the operator's authorized personnel and surveillance/ audit by DGCA officers.

12.2. The operator shall ensure that these records include for each flight pilots, at least:-

- a) The start, duration and end of each flight duty period.
- b) The start, duration and end of each duty period.
- c) Rest periods, and
- d) Flight Time.

12.3. Above may be achieved through a foolproof, transparent, computerized system for which there will be an online system with a link for DGCA to monitor. The operator shall evolve a system so that only designated officers of the operator and DGCA have access to the system. Further, the system shall have provision

of audit trail so that any change made in the data may be tracked down to its source.

- 12.4. The operator through the computerized system ensure that flight pilots are well within the flight time, flight duty period and rest period requirements before permitting them to operate the flight.
- 12.5. Operator shall evolve a mechanism by which the flight, duty and rest period records maintained by the company are validated by the flight crew.

Sd/-
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