



GOVERNMENT OF INDIA
OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION
TECHNICAL CENTRE, OPP. SAFDARJUNG AIRPORT, NEW DELHI – 110003

CIVIL AVIATION REQUIREMENT
SECTION 8 – AIRCRAFT OPERATIONS
SERIES H PART III
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**SUB: FLIGHT CREW TRAINING AND QUALIFICATION REQUIREMENTS
FOR GENERAL AVIATION OPERATIONS : HELICOPTERS**

1. INTRODUCTION

ICAO Annex 6 – Operation of Aircraft Part III, Section III contains standard and recommended practices (SARPs) which covers flight crew requirements for International general aviation helicopters. The Annex requires it to be ensured that all flight crew members are adequately trained and maintained competence to perform their assigned duties. Applicable sections specified in Schedule II also require all pilots to maintain proficiency in respect of the licence before exercising privileges of their licence.

2. APPLICABILITY

- 2.1. This CAR is applicable to helicopter pilots flying in General Aviation category.
- 2.2. This CAR lays down responsibilities of Pilot-in-Command towards training and qualification requirements to carry out operations and is issued under the provisions of Rule 29 C and Rule 133 A of the Aircraft Rules 1937.

3. DEFINITIONS/ TERMINOLOGY

- 3.1. **General Aviation Operation.** An aircraft operation other than a commercial air transport operation or an aerial work operation.
- 3.2. **Year.** One year consists of 12 consecutive months, e.g. 03 Feb 2015 to 02 Feb 2016 or 01 Jan 2016 to 31 Dec 2016.
- 3.3. **Month.** One month is considered as the period compassing consecutive days in the month of the Gregorian calendar e.g., 03 Feb to 02 Mar or 30 Dec to 29 Jan or 15 May to 14 Jun. Example of 6 months is 04 Jan to 03 Jul

4. COMPOSITION OF FLIGHT CREW

The PIC shall ensure that:

- 4.1. the composition of the flight crew and the number of flight crew members at designated crew stations are both in compliance with DGCA regulations, and no less than the minimum specified in the Rotorcraft Flight Manual (RFM) and Certificate of Airworthiness (C of A); and
- 4.2. all flight crew members hold an applicable and valid license acceptable to DGCA and are suitably qualified and competent to conduct the duties assigned to them; and
- 4.3. all crew members are properly rated; and
- 4.4. ensure that when passengers are to be carried at night, he shall have carried out within a period of six months immediately preceding the date of the intended flight not less than five take-offs and five landings by night as PIC as applicable and prescribed in Schedule II of Indian Aircraft Rules 1937.

5. HILL/MOUNTAIN FLYING OPERATIONS

The PIC will ensure that before undertaking hill/ mountain operations all pilots have undergone the following training:

- 5.1. **Ground Training.** The ground training specific to hill/ mountain shall be conducted for a duration of minimum 8 hours at a DGCA approved GTO/ ATO or by a TRE/ TRI as follows:
 - 5.1.1. Density altitude and performance consideration.
 - 5.1.2. Effects of decreased air density on engine and airframe.
 - 5.1.3. Type performance - Manufacturer's Flight Manual.
 - 5.1.4. Physiological Effects - lack of oxygen and external horizon.
 - 5.1.5. Mountain winds-convection and air mass stability, wind pattern across prominent features of rounded shape and sharp contours, standing waves, rotor streaming turbulence, ridges, conical hills and valleys.
 - 5.1.6. Transit flying-Pre-flight planning, blade stall, engine failure, wind assessment en-route.
 - 5.1.7. Actions when caught in a down draught, ridge crossing and valley flying.
 - 5.1.8. Wind assessment.
 - 5.1.9. Meteorological peculiarities of the area of operations and its effect on helicopter operations.
- 5.2. **Flying Training.** All pilots will undergo flying training on type with a TRE/ TRI based on their previous experience as per the following table: -

Total Flying Hours	Previously Experienced in Hill/ Mountain Ops	No previous experience in Hill/ Mountain Ops
Less than 2000 hrs total	2 hrs Dual training with TRE/ TRI + Area familiarisation as	Ground Training + 15 hrs Dual training with TRE/ TRI + Area

Total Flying Hours	Previously Experienced in Hill/ Mountain Ops	No previous experience in Hill/ Mountain Ops
flying experience on helicopters	required with a hill cleared experienced pilot + Hill Ops Check	familiarisation as required with a hill cleared experienced pilot + Hill Ops Check with TRE
2000 hrs and above total flying experience on helicopters	Area familiarisation as required with a hill cleared experienced pilot + Hill Ops Check.	Ground Training + 10 hrs Dual training with TRE/ TRI + Area familiarisation as required with a hill cleared experienced pilot + Hill Ops Check with TRE

5.3. **Hill Ops Check.** This will be flown once in a year with a TRE/ TRI/ Check Pilot involving landings at minimum three different helipads having a minimum elevation of 4000 feet.

6. SPECIAL VFR TRAINING AND QUALIFICATIONS

The PIC will ensure that before undertaking Special VFR flights all pilots have undergone the following training:

6.1. **Experience.** The pilot authorised to operate Special VFR flight shall have a minimum of 500 hours on helicopters out of which minimum 100 hours should be as PIC. When operating with two pilots under Special VFR, only the PIC need to be Special VFR qualified.

6.2. **Ground Training.** Ground Training covering the under mentioned topics shall be undertaken prior to undergoing the flying training/check. This ground training is required to be undertaken only once, prior to initial Special VFR clearance.

6.2.1. Use of nav aids.

6.2.2. Use of landing aids.

6.2.3. Spatial disorientation.

6.2.4. CFIT, Situational awareness.

6.2.5. Effects of monsoons.

6.2.6. ATS in controlled airspace.

6.3. **Ground Test.** The ground training shall be followed by a written test; minimum pass percentage marks for the written test shall be 80%.

6.4. **Flying Training.** The flying training will cover the following: -

6.4.1. Basic Instrument procedures.

6.4.2. Navigation with airborne equipment and available radio aids.

6.4.3. Departure and Arrival procedures in controlled airspace.

- 6.5. **Special VFR Release Check.** The Special VFR Release Check shall be conducted only on a helicopter and in a control zone to cover all aspects of flying training.
- 6.6. **Minimum Duration of Flying Training and Release Check.** The duration of the flying training shall not be less than 2:15 hours. The flying training on the helicopter may be accordingly reduced to 1:00 hr, if 1:15 hrs is conducted on a DGCA approved FNPT/ FTD/ FFS. This shall be followed by a one-time Special VFR Release Check of not less than 0:45 hours duration on the helicopter.
- 6.7. **Authorisation for Training.** Ground training and written test shall be conducted by a DGCA approved GTO/ ATO. The Special VFR Release Check shall be conducted by a DGCA approved TRI/ TRE. On successful completion of Ground Training, Flying Training and Release Check, TRI/ TRE shall certify in the pilot's logbook that he is fit to operate Special VFR flights.
- 6.8. **Validity.** The one-time authorisation to operate Special VFR flights shall be valid from the date of the release check conducted by the TRI/TRE, thereafter no yearly ground/flying recurrent training is required.
- 6.9. **Privileges.** Pilots authorised to operate Special VFR flights shall remain clear of clouds and in sight of the surface.
- 6.10. **Exceptions.** Pilots holding current Instrument Rating or TRE/TRI or Flight Instructor Rating/ Assistant Flight Instructor Rating are not required to undergo the training and release check to operate Special VFR flights as long as they continue to hold such qualifications as mentioned, and the same remain valid.

7. RECURRENT TRAINING REQUIREMENT

The PIC shall ensure that:

- 7.1. Each flight crew member has completed recurrent flight and ground training relevant to the type or variant of helicopter on which the flight crew member operates, including training on the location and use of all emergency and safety equipment carried.
 - 7.1.1. **Ground Training.** The duration of annual ground training will not be less than 16 hours training consisting of technical, performance, CRM, DGR and safety and emergency procedures training. The validity of the annual ground recurrent training shall be for a period of 12 months and shall commence from the date following the date of expiry of the previous validity subject to the condition that the recurrent training has been conducted within three months preceding the date of expiry.
 - 7.1.2. **Flight Training.** The duration of the bi-annual recurrent flight training will be as specified in the recurrent training syllabus at an approved ATO and not be less than two hours. The validity of the recurrent flight training shall be for a period of 24 months and shall commence from the date following the date of expiry of the previous validity subject to the condition that the recurrent training has been conducted within one months preceding the date of expiry.

- 7.2. Each flight crew member has been periodically checked to demonstrate competence in carrying out normal, abnormal and emergency procedures, as stipulated in the subsequent paragraphs.
- 7.2.1. Each pilot authorised to fly a single engine helicopter has undergone a ‘flight review’ in the preceding 12 months. The ‘flight review’ may be flown in a flight simulator or flight training device that is approved by DGCA.
- 7.2.2. Each flight crew member authorised to fly a multi-engine helicopter has undergone a Proficiency Check to demonstrate his/ her competence in carrying out normal, abnormal and emergency procedures on each type (and not variant of a type) of multi-engine helicopter. When a flight crew exercises the privileges of his licence on several variants of the same type of multi-engine helicopter, the PPC for each variant can be combined. However, when the flight crew exercises the privileges of his licence on different types of helicopters the PPC for each type shall be carried out separately.
- 7.2.3. The check shall be conducted without external visual reference when the flight crew member is required to operate under IFR.
- 7.2.4. The period of validity of a PPC for multi-engine helicopters shall be 12 months. The validity of the PPC shall commence from the date following the date of expiry of the previous validity subject to the condition that the PPC has been conducted within one month preceding the date of expiry. A PPC may be carried out in a helicopter or a Level C/ D FFS.
- 7.3. All flight crew requiring to operate a helicopter flight under IFR, shall have a valid and current Instrument Rating as stipulated in Section P of Schedule II of Indian Aircraft Rules 1937.
- 7.4. All pilots intending to undertake Special VFR operations shall have undergone Special VFR Training as explained In CAR Section 8, Series H, Part 1.

8. RECENT EXPERIENCE REQUIREMENTS

- 8.1. The PIC will ensure that all crew members have the recent flying experience of 03 (three) take-offs and landings on same type of helicopter or approved Level Full Flight Simulator (FFS) in the preceding 90 days.
- 8.2. In case of a longer break, the pilots are to undergo the following training before continuing to exercise the privileges of their licence: -

Break in Flying	Ground Refresh er	Flying training on Helicopter with TRE/ TRI OR at an ATO on FFS	Before flying SPO or multicrew PIC	
			PIC with copilot	As copilot
Day Flying – Single Engine Helicopters				
90 to 179 days	1:00	3 TOL as PIC with an experienced copilot or 1 session of 1:00 hr	-	-
180 days to less than 01 year	2:00	One dual sortie 1:00 h or 2 sim sessions Total 2:00	1:00	-

Break in Flying	Ground Refresher	Flying training on Helicopter with TRE/ TRI OR at an ATO on FFS	Before flying SPO or multicrew PIC	
			PIC with copilot	As copilot
1 year to less than 2 years	3:00	One Skill Test of 1:00 h or 3 sim sessions Total 3:00	2:00	-
2 years and more	5:00	One dual and one Skill Test of 1:00 each or 4 sim sessions Total 4:00	4:00	-
Day Flying – Multi Engine Helicopters				
90 to 179 days	1:00	3 TOL as PIC with an experienced copilot or 1 session of 1:00 hr	-	-
180 days to less than One year	2:00	One dual sortie 1:00 h or 2 sim sessions Total 2:00	-	-
1 year to less than 2 years	3:00	One Skill Test of 1:00 h or 3 sim sessions Total 3:00	-	-
2 years and more	5:00	One dual and one Skill Test of 1:00 each or 4 sim sessions Total 4:00	-	-
Night Flying – All Helicopters				
180 days to less than 1 year	-	One dual sortie 1:00 h or 2 sim sessions Total 2:00 h	-	-
1 year to less than 2 years	1:00	One Skill Test of 1:00 h or 3 sim sessions Total 3:00	-	1:00
2 years and more	2:00	One dual and one Skill Test of 1:00 each or 4 sim sessions Total 4:00	-	2:00

Notes.

“TOL” means ‘Takeoffs & Landings’.

Dual sorties, PPC, IR Check may be carried out by TRE/ TRI.

Route Check may be carried out by TRE/ TRI/ Check Pilot

Skill Tests shall be carried out by TRE only.

Ground Refresher may be carried out by TRE/ TRI/ Check Pilot/ Chief Pilot.

Recency by Day shall be carried out before commencing Recency by Night.

The pilot should hold current IR on type before undertaking night flying in IFR.

9. OPERATION ON MORE THAN ONE TYPE

9.1. **Conditions for all Helicopters.** A pilot may operate more than one helicopter type, subject to the following conditions:

- 9.1.1. the pilot has a valid license for the type(s) of helicopter(s); and
 - 9.1.2. the pilot has a minimum of 2,000 hours of flying experience of which not less than 1,000 hours as PIC on helicopters; and
 - 9.1.3. 50 hours on each type, including minimum three take-offs and landings in the last 90 days on type; and
 - 9.1.4. The applicable proficiency check has been conducted on each type and is valid; and
 - 9.1.5. meets the recurrent training requirements on type.
- 9.2. For **Multi-Engine Turbine Helicopters** the following additional requirements apply:
- 9.2.1. Not more than two helicopter types within the last twenty four hours; and
 - 9.2.2. On the additional type he has not less than 50 hours flying before he can fly on another type.
- 9.3. **Restrictions.** No operator shall permit its flight crew to operate and no flight crew shall operate more than three types of helicopters, of which not more than one types shall be with an AUW above 5700 Kgs.
- 9.4. **Combination of Helicopter and Aeroplane.** No operator shall permit and no flight crew shall operate more than one type of helicopter and one type of aeroplane (irrespective of their AUWs). Further provided that on the additional type he has not less than 50 hours flying before he can resume flying on both types.

10. ADDITIONAL REQUIREMENTS FOR PILOTS OPERATING HELICOPTERS OWNED BY CENTRAL/ STATE GOVERNMENTS/ PSUs

- 10.1. **Initial Crew Resource Management (CRM) Training.** The training shall be completed at an approved GTO/ATO before commencing flying, unless the crew member has previously completed an initial CRM course.
- 10.2. **Single Pilot Operations**
- 10.2.1. **Minimum Requirements.** Single Pilot operations may be undertaken on helicopters certificated for single pilot operations provided the pilot has minimum 100 hours PIC on type for pilots having less than 2000 hrs PIC experience on helicopters or minimum 50 hours PIC on type for pilots having more than 2000 hrs PIC experience on helicopters.
 - 10.2.2. **SPO Release Check.** A pilot shall undertake SPO only after successful completion of a Release Check of minimum 0:45 hours duration to be carried out by a TRE/TRI.
 - 10.2.3. In case a pilot is previously qualified for SPO on any type, PIC requirements to qualify SPO on another type shall be half of those mentioned at Para 10.3.1 above. However, the pilot will need to undergo a Release Check as mentioned at Para 10.3.2 above.

- 10.2.4. SPO shall not be undertaken on flights where two-pilot operation has been specified by the DGCA, such as VVIP/VIP flights etc.
- 10.2.5. SPO qualification on one variant of helicopter shall be considered to meet the requirements on all variants of that type of helicopter, provided the specified Differences Training has been successfully completed and entered in the Pilot's Log Book.
- 10.2.6. Policy on undertaking SPO shall be specified in the Operations Manual of the operator.

10.3. VIP Flights.

- 10.3.1. When operating VIP flights with helicopters, the pilot-in-command shall possess a CPL (H) or ATPL (H) with at least 2000 hrs. including 500 hours of PIC experience, 75 hours as PIC on type of aircraft, and at least 10 hours of night flying experience.
- 10.3.2. In addition, the pilot should have a minimum of 30 hours as PIC experience in the last 6 months including five hours on type in the last thirty days of the intended flight. In case 30 hrs. recency during the last 6 months is not met with, then in last 30 days, a satisfactory skill test (as required for licence renewal) shall be carried out followed by 5 hrs. of PIC experience.
- 10.3.3. VIP flights shall always be operated with a multiple crew composition and the PIC shall meet the requirements of 10.4.1 or 10.4.2, as the case may be.

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