



**CIVIL AVIATION REQUIREMENTS
SECTION 8 - OPERATIONS
SERIES 'O', PART I
6th SEPTEMBER 2004**

EFFECTIVE: FORTHWITH

Subject : Authorisation of Special VFR flight for Helicopters

1. Introduction:

- 1.1 In many parts of India, prevalence of dust or haze in the summers and mist or fog in the winters results in atmospheric obscurity, which invariably lowers the visibility to less than 5 Km during most part of the year. Similar conditions also exist in metropolitan cities due to pollution. In such conditions, flights under Visual Flight Rules cannot be operated in controlled areas/zones as the criterion of visibility of more than 5 Km visibility is not met. In such conditions when the ground visibility is not less than 1,500 metres, Special VFR flights may be authorised by ATC to: enter a control zone for the purpose of landing, take-off and depart from a control zone, cross the control zone or operate locally within a control zone.
- 1.2 This Civil Aviation Requirement stipulates the conditions under which an operator or a pilot may request ATC to authorise Special VFR flights for helicopters.
- 1.3 This CAR is issued under the provisions of Rule 133A of the Aircraft Rules, 1937.

2. Definitions:

Controlled flight. Any flight which is subject to an air traffic control clearance.

Control zone. A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

IFR. The symbol used to designate the instrument flight rules.

IFR flight. A flight conducted in accordance with the instrument flight rules.

Special VFR flight. A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

VFR. The symbol used to designate the visual flight rules.

VFR flight. A flight conducted in accordance with the visual flight rules.

Visual meteorological conditions. Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

VMC. The symbol used to designate visual meteorological conditions.

3. General Requirements for Authorisation of Special VFR flights:

3.1 When the ground visibility is not less than 1,500 metres, ATC may authorise Special VFR flights provided the helicopter is certified for IFR operations.

3.2 ATC may also authorise Special VFR flights for helicopters not certified for IFR operations provided the helicopter is fitted with the minimum instruments stipulated in para 4 of this CAR.

3.3 In case of Performance Class I and II helicopters, ATC may also authorise Special VFR flights when the ground visibility is not less than 1000m.

3.4 Special VFR flights shall be operated by only those pilots who have:

- a) Instrument Rating, or
- b) Examinership on the type of helicopter flown, or
- c) Flight Instructor Rating/Assistant Flight Instructor Rating, or
- d) Authorisation to operate Special VFR flights after undergoing training and flight test as stipulated in para 5 of this CAR.

3.5 Both, operator and the Pilot-in-Command, shall be responsible for ensuring the compliance of the requirements of helicopter and pilot qualification for Special VFR operations stipulated in this CAR.

3.6 ATC has discretion to ask Pilot-in-Command to confirm the compliance of the requirements of this CAR before authorising Special VFR flight.

4. Requirement of Minimum Instruments for Special VFR operations on helicopters not certified for IFR operations

In addition to the instruments to be fitted for flight under VFR, the helicopter shall be fitted with the following instruments:

- i) Artificial horizon
- ii) Heading Indicator (Direction Gyro)
- iii) Rate of Climb Indicator
- iv) VOR or ADF
- v) GPS (recommended)

Note: Helicopter should not be used for Special VFR flights with any of above equipment unserviceable.

5. Authorisation of Pilots to operate Special VFR flight

- 5.1 Experience: The pilot authorised to operate Special VFR flight shall have a minimum of 500 hours PIC on helicopters.
- 5.2 Training and Flight Test: The pilot shall undergo training and flight test as stipulated at Appendix 'A'. Ground training and written test would be conducted either by IGRUA or by Rotary Wing Society of India. Flight test shall be conducted by a DGCA approved examiner. On successful completion of training and flight test, DGCA examiner shall certify in the pilot's logbook that he is fit to operate Special VFR flights on group of similar helicopters. Instructions for the DGCA examiner for the flight test are given at Appendix 'B'.
- 5.3 Validity: The authorisation to operate Special VFR flights shall be valid for one year from the date of the flight test conducted by the Examiner. The flight test for authorisation of Special VFR can be combined with the mandatory proficiency check.
- 5.4 Renewal: For renewal the pilot shall undergo the same ground training and flight test as stipulated at Appendix 'A'. Two consecutive flight tests shall not be conducted by the same examiner.
- 5.5 Privileges: Pilots authorised to operate Special VFR flights shall remain clear of clouds and in sight of the surface.
- 5.6 Pilots holding Instrument Rating or Examinership on the type of helicopter flown or Flight Instructor Rating/Assistant Flight Instructor Rating are not required to undergo the training and flight test as stipulated at Appendix 'A' to operate Special VFR flights.



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Appendix 'A'

**Minimum Training Requirements for Pilots for
Issue of Authorisation to Operate Special VFR Flights**

1. Ground Training

The ground training shall be at least for a day covering at least following subjects, which may be conducted by the operator himself.

- a. ATC procedures in controlled airspace
- b. Instruments for Special VFR
- c. Use and contents of a Jeppesen Route Manual and charts
- d. R/T procedures
- e. Use of Navigation Aids

The ground training shall be followed by a written test, which would be conducted either by IGRUA or the Rotary Wing Society of India. Minimum pass percentage marks for the written test shall be 80%.

2. Flying Training

- a. Basic Instrument procedures
- b. Navigation with airborne equipments and radio aids
- c. Departure and Arrival procedures (i.e. SID's and STAR's) and Airfield approach procedures in controlled airspace.

When the flying training is performed in a helicopter, artificial means of limiting outside references (hood – coloured windscreens etc.) should be used for the trainee.

3. Flight Test

The Flight test shall be conducted only on a helicopter and in a control zone to cover all aspects of flying training. Flight test shall include at least one successful instrument approach and landing by the trainee pilot. Flight Test Performa is at Annexure '1'.

4. Minimum Duration of Training and Flight Test

The duration of the flying training and test shall not be less than 3 hours. The flying training on the helicopter may be reduced to 1:30 hours, if part of the flying training is conducted on simulator/Instrument Procedure Trainer (IPT). In both cases, the duration of the flight test shall not be less than 45 minutes.

Annexure '1'

FLIGHT TEST FOR SPECIAL VFR OPERATIONS – (HELICOPTERS)

Company		Date of Check	
Pilot's Name		Block time	
License No.		Location	
Date of last check		Type of Helicopter	
Examiner		Registration	

A.	Initial or recurrent ground training	
1.	Ground Training and passed the written test	Yes/No
2.	Flying Training	Yes/No
B.	Ground Checks	
	Pilot's knowledge of:	
1.	a) ATC procedures in controlled airspace	Fit/ Unfit
	b) Use and contents of the Jeppesen Route Manual and charts	Fit/ Unfit
	c) R/T Procedures	Fit/ Unfit
	d) Use of Navigation aids	Fit/ Unfit
2.	a) VFR & Special VFR Weather minima	Fit/ Unfit
	b) Requirements for helicopter equipment	Fit/ Unfit
	c) Aerodrome Runway, SID's & STAR's in use	Fit/ Unfit
	d) Procedure in case of denial for Special VFR	Fit/ Unfit
C.	Preflight	
1.	Flight planning	Fit/ Unfit
2.	Pre-flight inspection	Fit/ Unfit
3.	Use of checklist	Fit/ Unfit
4.	Engine starting procedures	Fit/ Unfit
5.	Cockpit check after starting	Fit/ Unfit
6.	Departure briefing	Fit/ Unfit
7.	Navigation systems set-up	Fit/ Unfit
8.	Taxi	Fit/ Unfit
D.	Departure	
1.	Departure Route	Fit/ Unfit
2.	Altitude & Speed	Fit/ Unfit
3.	Maintaining visual contact with the surface	Fit/ Unfit
E.	Approach	
1.	Arrival Route	Fit/ Unfit
2.	Holding	Fit/ Unfit
3.	Altitude & Speed	Fit/ Unfit
4.	Final Approach	Fit/ Unfit
5.	Maintaining visual contact with the surface	Fit/ Unfit
6.	Instrument approach and landing carried out by the trainee pilot (at least one successful instrument approach and landing)	Fit/ Unfit
F.	General flight ability	
1.	Radio Communication procedures	Fit/ Unfit
2.	Co-ordination	Fit/ Unfit
3.	CRM & Situation awareness	Fit/ Unfit
G.	Result of Check	Fit / Unfit
H.	Entered in the Logbook	Yes / No
Remarks/Comments		
Pilot's Signature		Examiner's Signature

Appendix 'B'

**INSTRUCTIONS FOR EXAMINER
FLIGHT TEST FOR SPECIAL VFR OPERATIONS – (HELICOPTERS)**

- A. **Status of initial or recurrent ground training:** Confirm that the pilot attended:
1. Ground Training and passed the written test
 2. Flying Training
- B. **Ground Checks:**
1. Check that Pilot's knowledge of:
 - a. ATC procedures in controlled airspace,
 - b. Use and contents of the Jeppesen Route Manual and charts,
 - c. R/T Procedures, and
 - d. Use of navigation aids.
 2. Check for knowledge pertaining to:
 - a. VFR & Special VFR Weather minima: *The pilot must have complete knowledge of these minima.*
 - b. Requirement for helicopter equipment: *The pilot must know which equipment must be installed in the helicopter when operated within controlled airspace.*
 - c. Aerodrome Runway, SID's & STAR's in use: *Check the pilot's knowledge and the influence it may have on Special VFR operations.*
 - d. Procedure to be followed in case of denial for Special VFR in control zone. *It must be stressed that unless he has an Instrument Rating and the helicopter is approved for IFR flying, he must not accept an IFR clearance, but must remain clear of clouds and maintain visual contact with the ground. In worst case, if the visibility unexpectedly decreases, the pilot must look for an open area and land the helicopter.*
- C. **Pre-flight:**
1. Flight planning: *Check Pilot's ability to perform all necessary flight planning especially for a Special VFR flight. The main issue is the weather forecast, actual weather, expected weather enroute to be flown, extra fuel for routing at low level (minimum is 500 ft) etc.*
 2. Pre-flight inspection: *Check of documentation and acceptance of helicopter by the pilot, especially with respect to the helicopter being equipped, as required.*
 3. Use of checklist: *Explanation from the pilot on the use of the checklist.*
 4. Engine starting procedure: *Check that a fireguard is posted and the pilot ensures a clear area before start-up.*
 5. Cockpit check after starting: *Check that the pilot ensures all checks performed and all doors closed.*
 6. Departure briefing: *A briefing about the planned route out of control zone.*
 7. Navigation system set-up: *Check pilot's ability to perform correct set-up of navigation aids and serviceability of instruments.*
 8. Taxi: *Check that the pilot confirms a clear area before taxiing. (If taxiing on wheels – check that braking action is assured and in case of hover taxiing – check hover taxi height.)*
- D. **Departure:**
1. Departure Route: *Check that the departure route is followed and the take-off is performed using a procedure that will ensure a safe forced landing in case of an engine failure (for single engine helicopter).*

2. Altitude and speed:
 - a) *Ensure that assigned altitude is maintained and that flight is not taking place below minimum flight altitudes.*
 - b) *Check that a speed ensuring adequate opportunity to observe other traffic or any obstacles is maintained.*
3. Maintain visual contact with the surface and clear of clouds: *Stress the importance of this issue.*

E. Approach:

1. Arrival Route: *Ensure the assigned or approved arrival route is followed.*
2. Holding: *If the helicopter is asked to enter a holding outside the control zone, check that correct procedure is followed.*
3. Altitude and speed: *Check that correct altitude and speed is maintained throughout all manoeuvres.*
4. Final Approach: *Ensure all pre-landing checks have been performed before final approach is established.*
5. Maintaining visual contact with the surface and clear of clouds: *Stress the importance of this issue.*
6. Instrument approach and landing: *The trainee pilot shall carry out at least one successful instrument approach and landing.*

F. General Flight Ability:

1. Radio communication procedures: *Check the pilot's ability to perform communication with ATC/ATS in a proper way.*
2. Co-ordination: *Check the pilot's ability to co-ordinate with other involved personnel throughout the flight.*
3. Situation awareness: *Evaluate the pilot's ability to evaluate the situation and take necessary actions.*

G. Result of Check:

Fit: *The pilot is competent to operate special VFR flight.*

Unfit: *The pilot is not competent to operate Special VFR flight. Specific reason(s) for in competency shall be recorded in the Remarks/ Comments column.*

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