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GOVERNMENT OF INDIA

OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION

TECHNICAL CENTRE, OPP SAFDURJUNG AIRPORT, NEW DELHI.

**CIVIL AVIATION REQUIREMENTS
SECTION 8 - AIRCRAFT OPERATIONS
SERIES 'A', PART I**

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F. No. AV 22024/9/2014-FSD

Subject: **MINIMUM FLIGHT CREW REQUIREMENTS**

1. INTRODUCTION

To ensure safe operation of an aircraft it is necessary to have adequate flight crew members, who are appropriately trained, qualified and licenced, to operate the particular type of operations on the aircraft. Rule 38A(7) of the Aircraft Rules, 1937, stipulates broadly the minimum crew required to operate a flight. This Civil Aviation Requirements (CAR) gives in detail the requirements relating to minimum flight crew.

2. SCOPE

The requirements contained in this CAR are applicable to aeroplanes and helicopters engaged in scheduled (including scheduled commuter), non-scheduled and other public transport operations including State Government operations and aerial work operations.

3. MINIMUM FLIGHT CREW REQUIRMENTS:

An aircraft registered in India shall be operated by flight crew, adequate in number and description, duly trained, and qualified on the type of aircraft to be flown, to ensure the safety of operations. The following requirements in this regard should be complied with by all the operators covered under para 2 of this CAR.

- i) The number of the flight crew members operating any flight, shall not be less than that specified in the approved aircraft Flight Manual or Operations Manual or Certificate of Airworthiness.
- ii) All aeroplanes with AUW below 5700 kgs ~~exceeding 1500 kgs engaged in Scheduled / Non-Scheduled Air Transport operations,~~ shall be flown by at least two pilots in IFR and/or night conditions.
- iii) All aircrafts operated by State Governments and engaged in carriage of VVIP/VIP shall be flown by at least two pilots.
- iv) Aircraft having all-up-weight more than 5700 kg shall be flown by at least two pilots.
- v) Irrespective of all-up-weight, Aerial work aircraft, when engaged in flight calibration, aerial survey and remote sensing work, shall be flown by two pilots.

vi) An aircraft having a seating capacity of 10 or more seats, excluding pilot seat(s), shall be flown by two pilots.

vii) The following category of aircraft irrespective of seating capacity and all-up-weight, when required to be flown under instrument flight rules, shall be operated by two pilots unless approved otherwise by DGCA in accordance with para 4.9.1 of CAR Section 8 Series 'O' Part II (Reproduced at Appendix 'A'):

a) aircraft powered by one or more Turbo Jet or Turbo fan engines;

b) aircraft powered by one or more Turbine Propeller engines and provided with a means of pressurising the passengers cabin;

c) aircraft powered by two or more Turbine Propeller engines and not provided with a means of pressurising the passengers cabin unless it is equipped with a certified auto-pilot;

d) aircraft powered by two or more piston engines unless it is equipped with a certified auto-pilot.

4. OTHER FLIGHT CREW REQUIREMENTS:

The requirements relating to carriage of Flight Navigator, Flight Engineer, Flight Radio Operator, Flight Radio Telephone Operator and Cabin Attendants, as specified in Rule 38A and 38B of Aircraft Rules 1937 shall be complied with in all cases.

5. SINGLE PILOT OPERATIONS:

No operator may use any person nor may any person serve as a Pilot-in-Command for the type of operations mentioned in para 2 of this CAR for single pilot operation unless that person had at least 100 hours Pilot-in-Command experience on the type and model of the aircraft to be flown and has met all other applicable requirements.

6. GENERAL:

i) Notwithstanding the above requirements, DGCA may require an operator to carry additional flight crew members, if considered necessary, for safety of aircraft operations. DGCA may also consider relaxing any of the above requirement if the operator satisfies that the required safety level of operations is achieved in an alternate manner.

ii) AIC No.11/1990 is hereby cancelled.

Director General of Civil Aviation

**REQUIREMENTS FOR SINGLE PILOT OPERATIONS UNDER
THE INSTRUMENT FLIGHT RULES (IFR)**

(Reproduced from CAR Section 8 Series 'O' Part II)

4.9 Additional requirements for single pilot operations under the Instrument Flight Rules (IFR)

4.9.1 An aeroplane shall not be operated under the IFR by a single pilot unless approved by DGCA.

4.9.2 An aeroplane shall not be operated under the IFR by a single pilot unless:

- a) the flight manual does not require a flight crew of more than one;
- b) the aeroplane is propeller-driven;
- c) the maximum approved passenger seating configuration is not more than nine;
- d) the maximum certificated take-off mass does not exceed 5 700 kg;
- e) the aeroplane is equipped as described in 6.22; and the pilot-in-command has satisfied requirements of experience, training, checking and recency described in 9.4.5.

6.22 All aeroplanes operated by a single pilot under the Instrument Flight Rules (IFR)

For approval in accordance with 4.9.1, all aeroplanes operated by a single pilot under the IFR shall be equipped with:

- a) a serviceable autopilot that has at least altitude hold and heading select modes;
- b) a headset with a boom microphone or equivalent; and
- c) means of displaying charts that enables them to be readable in all ambient light conditions.

9.4.5 Single pilot operations under the Instrument Flight Rules (IFR)

9.4.5.1 For single pilot operations intended to be carried out under IFR, the pilot shall be a holder of Instrument Rating on the type of aeroplane and shall meet the experience, recency and training requirements of 9.4.5.2.

9.4.5.2 The pilot-in-command shall:

- a) for operations under the IFR or at night, have accumulated at least 50 hours flight time on the class of aeroplane, of which at least 10 hours shall be as pilot-in-command;
- b) for operations under the IFR, have accumulated at least 25 hours flight time under the IFR on aeroplanes used for commercial air transport, which may form part of the 50 hours flight time in sub-paragraph a);

- c) for operations at night under IFR, have accumulated at least 15 hours flight time at night, which may form part of the 50 hours flight time in subparagraph a);
- d) for operations under the IFR, have acquired recent experience as a pilot engaged in a single pilot operation under the IFR of:
 - (i) at least five IFR flights, including three instrument approaches carried out during the preceding 90 days on the class of aeroplane in the single pilot role; or
 - (ii) an IFR instrument approach check carried out on such an aeroplane during the preceding 90 days;
- e) for operations at night under IFR, have made at least three take-offs and landings at night on the class of aeroplane in the single pilot role in the preceding 90 days; and
- f) have successfully completed training programmes that include, in addition to the requirements of 9.3, passenger briefing with respect to emergency evacuation, autopilot management, and the use of simplified in-flight documentation.

9.4.5.3 The initial and recurrent flight training and proficiency checks indicated in 9.3.1 and 9.4.4 shall be performed by the pilot-in-command in the single pilot role on the class of aeroplane in an environment representative of the operation.

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