



GOVERNMENT OF INDIA

OFFICE OF DIRECTOR GENERAL OF CIVIL AVIATION
TECHNICAL CENTRE, OPP SAFDARJANG AIRPORT, NEW DELHI

CIVIL AVIATION REQUIREMENTS
SECTION 4 – AERODROME STANDARDS
& LICENSING
SERIES 'B' PART VI
22ND MARCH 2012

EFFECTIVE: FORTHWITH

Subject: **Minimum Safety Requirements for Temporary/ Unlicensed Aerodromes.**

1. INTRODUCTION

- 1.1 Rule 78 of the Aircraft Rules, 1937 requires licensing of such aerodromes that are used as regular place of landing and departure by a scheduled air transport service or for a series of landings and departures by any aircraft carrying passengers or cargo for hire or reward. Further, sub rule (4) of the said rule stipulates that no person shall operate or cause to be operated any flight from a temporary aerodrome or an aerodrome which has not been licensed or approved, as the case may be, under these rules unless it meets the minimum safety requirements laid down by the Director-General.
- 1.2 There are number of existing aerodromes (air strips) in India which are not being used on regular basis for aircraft operations. These aerodromes, by virtue of limited facilities, usage and being in existence and in operation cannot be equated with fully compliant aerodromes. The list of some of such aerodromes is available in AIC 18/1986. Such aerodromes sometimes are having only a runway and are normally owned by state government or other entities which are having their limited use. However, such owners extend their use on regular basis to aircraft operators without assuming the responsibility for operational aspects/ facilities at the aerodromes. Regulatory oversight cannot be performed over such aerodromes due to various factors e.g. periodicity of operation, geographical location, large number of such sites.

Note: Any aerodrome constructed and in operation prior to 1st Sept. 1992, (i.e. date of issue of AIC No. 22 of 1992) will be considered as an existing aerodrome for this purpose.

- 1.3 When an aerodrome not licensed or approved is being used privately, the pilots, who are well aware of the performance characteristics of their aircraft, should also take note that the aerodrome dimensions, facilities and operating practices are appropriate and proportionate for the intended operations.
- 1.4 It is a common practice that usage of such aerodromes is permitted by the owner with or without assuming any responsibility regarding the availability of minimum facilities.

Therefore, it is imperative to ascertain that minimum facilities required for safe aircraft operations are available at site. Due to this reason, it has been made obligatory in CAR, Section 8, Series 'O' Part II & III, Operation of Commercial Air Transport/ General Aviation – Aeroplanes, on part of operator/ Pilot-in-Command, to ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities available and directly required on such flight, for the safe operation of the aircraft and the protection of the passengers, are adequate for the type of operation under which the flight is to be conducted and are adequately operated for this purpose.

- 1.5 The requirements provided in this CAR are generic in nature for private aircraft operators; however, the NSOP holder may carry out safety assessment and adopt mitigation measures prior to operating isolated passenger flight. Only those operations which are undertaken by aircraft registered under private category shall be considered as private aircraft operations.
- 1.6 The aim of this CAR is to provide requirements on minimum safety requirements at existing aerodrome not licensed/approved. However, new aerodromes are not intended to cover under this CAR. The CAR is issued under the provisions of Rule 133A of the Aircraft Rules, 1937 in pursuance to sub rule (4) of Rule 78.

2. Applicability

- 2.1 This CAR is applicable for the aircraft operators to ensure availability of the minimum safety requirement at the aerodromes not licensed/approved prior to operation except for a series of flights by NSOP holder in accordance with para 2.4 of CAR Section 3, Series 'C', Part-III.
- 2.2 CAR covers aircraft operation requiring aerodrome specification up to 3C only.

3. Minimum Facilities at the Aerodrome/ landing sites

The uncontrolled aerodromes are generally used for day VFR operation. Therefore, the facilities required for aircraft operations need to meet the specifications required for such operations. The aerodrome should have following facilities for the intended aircraft operation and endeavour should be made to ensure that they are meeting to the specifications provided for such facilities in the Civil Aviation Requirements Section 4, Series 'B' Part –I, to the extent possible.

- 3.1 **Runway:** Runway should be capable of withstanding the requirement for aeroplanes is intended to serve. The physical condition of the runway surface should be free of irregularity, pot holes so that not to cause damage to the aircraft. The slopes of the runway should also be suitable for operations and drainage characteristics. In case of operations of aircraft having AUW more than 5700 kgs, the runway strength shall be available in terms of PCN.

The runway length shall be adequate to meet the operational requirements of the operating aeroplane and shall be not less than the length determined by applying the corrections for local conditions to the operations and performance characteristics of the operating aeroplane.

The width of a runway shall be not less than the appropriate dimension specified in the following tabulation:

Outer Main Gear Wheel Span (OMGWS)				
Code Number	Up to but not including 4.5 m	Up to 4.5 m but not including 6 m	6 m up to but not including 9 m	9 m up to but not including 15 m
1	18m	18m	23m	--
2	23m	23m	30m	--
3	30m	30m	30m	45m

The marking on runway should be visible from the air to identify the runway, designation, centerline and limits of the landing area. The runway marking specification may be referred to CAR Section 4 Series B part I.

- 3.2 Taxiways:** Where provided, the taxiways should be capable to meet the aircraft performance characteristics for exit and entry into the runway and should be equipped with guidance for ground movement of the aircraft.

The marking on taxiway should be available. The taxiway marking specification may be referred to CAR Section 4 Series B part I.

- 3.3 Aprons:** Where provided, Aprons of sufficient size to permit the parking of the aircraft and embarkation / disembarkation of passengers without causing interference on other aircraft operations.
- 3.4 Runway Strip & object in Runway Strip:** The runway strip of suitable dimension should be available depending on type of intended Aerodrome operations. The runway strip should be properly levelled, graded and free from vegetation the runway strip shall be flush with the surface of the runway, shoulder or stopway. There runway strip should be available to provide safeguard and minimize damage in case of runway excursions, beyond the runway limits.

An object situated on a runway strip which may endanger aeroplanes shall be regarded as an obstacle and shall, as far as practicable, be removed.

Further, No fixed object, other than visual aids required for air navigation or those required for aircraft safety purposes and which must be sited on the runway strip and satisfying the frangibility requirement shall be permitted any part of on a runway strip.

No mobile object shall be permitted on this part of the runway strip during the use of the runway for landing or take-off.

- 3.5 Signal Area.** Since, uncontrolled aerodromes are not having provision for Air to Ground communication, it is imperative that a Signal area shall display at least Landing Direction Indicator and Aerodrome Identification Sign to indicate runway in use and the identification of the aerodrome.

The signal area shall be an even horizontal surface at least 9 m square. The colour of the signal area shall be chosen to contrast with the colours of the signal panels used, and it shall be surrounded by a white border not less than 0.3 m wide.

- 3.6 Wind Direction Indicators:** A wind sock, clearly visible from the air, and positioned so as to indicate a representative direction and strength, should be provided. The aerodrome owner should avoid locations close to trees or buildings or where terrain may cause an unrepresentative indication, and ensure it will not interfere with aircraft taking off or landing.

The locations and other specification of Wind Direction Indicator may be referred to para 5.1.1 of CAR Section 4 Series B part I

- 3.7 Obstacles:** For the safety of the aircraft operation it is essential that at least approach & take off surface and transitional surface are free of obstacles. The obstacle in the vicinity of the runway should be clear of safety area provided for aircraft excursion.

In the ideal condition the slope requirement for approach path for non-instrument runway is 3.33% and required to be provided up to 3.0 km. Any obstacle protruding in the approach/ take off surface would severely impact the aircraft operation and impose operational restrictions.

In the ideal condition the slope of the transitional surface shall be measured in a vertical plane at right angles to the centre line of the runway where runway code is 1 or 2 and has a visual or non-precision approach the slope is 20% (1:5). For all other runways the slope is 14.3% (1:7). Any obstacle protruding in transitional surface may impact the aircraft operation and impose operational restrictions.

Any structure that, because of its height or position, could be a hazard to an aircraft landing or taking off should be conspicuously marked if it cannot be removed or minimised. Unregulated growth of obstacles may render the aerodrome unusable and therefore impact of obstacles needs to be assured by the aircraft operator in order to ensure the safety of aircraft operations.

- 3.8 Rescue and Fire Fighting:** The Rescue and firefighting equipment and services shall be available at an aerodrome. The services shall be available throughout the hours of aircraft operation and for 15 minutes after the departure of the last aircraft or until the aircraft has reached its destination, whichever is the earlier.

The arrangements /Level of protection shall be determined from Table 9-1 and based on the aeroplanes Overall length and their fuselage width.

The Table 9-2. Specifies the minimum usable amounts of extinguishing agents commensurate with the Aerodrome ARFF category and type of Aeroplane intended for use.

Table 9-1. Aerodrome category for rescue and fire fighting

Aerodrome category	Aeroplane overall length	Maximum Fuselage Width
1	0 m up to but not including 9 m	2 m
2	9 m up to but not including 12 m	2 m
3	12 m up to but not including 18 m	3 m
4	18 m up to but not including 24 m	4 m

5	24 m up to but not including 28 m	4 m
6	28 m up to but not including 39 m	5 m

Table 9-2. Minimum usable amounts of extinguishing agents

Foam meeting performance level A			Foam meeting performance level B		Foam meeting performance level C		Complementary agents	
Aerodrome Category	Water (L)	Discharge rate foam solution/minute (L)	Water (L)	Discharge rate foam solution/min (L)	Water (L)	Discharge rate foam solution/min (L)	Dry chemical powders (kg)	Discharge Rate kg/sec
1	2	3	4	5	6	7	8	9
1	350	350	230	230	160	160	45	2.25
2	1000	800	670	550	460	360	90	2.25
3	1800	1300	1200	900	820	630	135	2.25
4	3600	2600	2400	1800	1700	1100	135	2.25
5	8100	4500	5400	3000	3900	2200	180	2.25
6	11800	6000	7900	4000	5800	2900	225	2.25

The additional information and reference for Rescue and fire fighting arrangements can be referred to para 9.2 of CAR Section 4 Series B part I.

4 Protection of site

- 4.5 Availability of fence or other suitable barrier to prevent the entrance to the movement area of animals large enough to be a hazard to aircraft.
- 4.6 Where required, the aspect of crowd control, security of operation and separation of crowd from flying operations shall also be ensured.

5 General Safety Requirements

- 5.5 Prior permission from owner of the air strip should be obtained by the aircraft operator before operation.
- 5.6 It is in the interest of airport owner and aircraft operators that a procedure is developed for visiting pilots for indicating the availability of the facility, procedures for approach, landing/take off and warning on hazards associated with the aerodrome. A requirement to obtain prior permission before landing will facilitate such hazard warning by allowing visiting pilots to be briefed. Such information may also be usefully included on the aerodrome's website, if one exists.
- 5.7 Based on the information available through the aerodrome operator or any other reliable source, the aircraft operator may develop an SOP in case the operations to the aerodrome are not restricted for one time operation.

- 5.8** Subject to the number of movements, system for communicating with aircraft from ground to communicate essential information, either through walkie talkie/VHF/ aldies lamp, is desirable. Aircraft operator / aerodrome owner may either provide facilities themselves or designate/assign the responsibility to a person for safety of aircraft operations, passengers and people on ground.
- 5.9** When such place is used by aircraft carrying VIP, all instructions issued from time to time in this regard shall be complied with during such operations.
- 5.10** The aircraft operator shall file the flight plan and ensure that meteorological conditions are appropriate to the type of operation before originating flight from such aerodromes.
- 5.11** Necessary arrangement for picketing /mooring of aircraft should be made for overnight parking as well as at aerodromes likely to be affected by strong winds/weather.
- 5.12** First aid facility as minimum medical requirement may be provided at the aerodrome and also arrangements with locally available medical facilities may be made to deal with emergencies.

6 Passenger services facilities and Security requirements

- 6.5** The aircraft operator should ensure arrangement for minimum facilities/ amenities for the passenger facilitation.
- 6.6** Necessary arrangements shall also be made available for escort of passengers to and from the aircraft parking area.
- 6.7** The aircraft operator shall ensure that security requirements are complied with as per the approved Security Manual.



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