



GOVERNMENT OF INDIA

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

CIVIL AVIATION REQUIREMENTS
SECTION 8 - AIRCRAFT OPERATIONS
SERIES 'A' PART II

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EFFECTIVE:FORTHWITH

Subject:-**SAFETY REGULATION AND OVERSIGHT OF FLIGHT OPERATIONS.**

1. OBJECTIVE

- 1.1 The main objective of the safety regulation and oversight of flight operations to ensure:
- a) effective implementation of the safety related Standards and Recommended Practices contained in the ICAO Annexes, particularly Annexes 1 and 6 and the relevant rules, regulations, procedures and requirements laid down in the various national regulatory documents;
 - b) that safety weaknesses in the flight operations are and necessary corrective measures are taken in time before they become a potential safety hazard; and
 - c) that the capability of the operator to conduct the operations safely be maintained at or above the level required by the regulations.
- 1.2 Strict adherence to the laid down operating procedures and limitations and compliance with the rules and regulations shall be the motto and watch-word of safety regulation and oversight of flight operations.
- 1.3 This Civil Aviation Requirement (CAR) identifies the important operational aspects which need close monitoring and describes broadly the system of safety oversight required to be exercised on the air transport operations by the operators and the DGCA officers. The CAR is issued under the provisions of Rule 133A of the Aircraft Rules, 1937, and Section 5A of the Aircraft Act, 1934 for information, guidance and compliance by the concerned agencies.

2. APPLICABILITY

All Indian operators engaged in scheduled air transport services for carriage of passengers, mail or cargo shall comply with the requirements of this CAR. The safety requirements are equally applicable to the Non-Scheduled/Air Taxi Operators who are also encouraged to adopt similar in house monitoring system as far as practical and applicable to their operations. For new operators seeking permission to commence operations, it shall be a pre-requisite for the grant of the operating permit to furnish information confirming that they have established the necessary systems and have adequate qualified manpower and infrastructure to implement the safety regulations and for inhouse monitoring of their flight operations as stipulated in this CAR. Concerned DGCA officers shall exercise safety oversight on flight operations as described in this CAR.

3. SAFETY REGULATION OF FLIGHT OPERATIONS

Various statutory/regulator documents, namely, the Aircraft ACT 1934, the Aircraft Rules 1937, Aeronautical Information Publication (AIP) India, Aeronautical Information Circulars (AIC), Civil Aviation Requirements (CAR) etc. stipulate the safety and operational requirements applicable to different types of operations, which shall be complied with by the operators. In addition, implementation of the following important safety and operational requirements shall be closely monitored by the operators and DGCA Officers to enhance safety of operations.

- 3.1 In accordance with Rule 134 of the Aircraft Rules, 1937, no person shall operate any air transport service in India without obtaining the necessary permit for operating such services. The operating permit shall be maintained current and valid and the operations shall be conducted within the scope and provisions of the permit.
- 3.2 The operators shall demonstrate, before grant of the permit, their capability to safely operate the air transport services sought to be operated. It shall be ensured that the manpower, infrastructure, facilities, systems and operating capability does not degrade below the required level at any time and is enhanced continually commensurate with expansion of operations.
- 3.3 The operators shall clearly outline in their operations manual their policy relating to flight operations in accordance with the provisions of ICAO Annex 6, Aircraft Rules, 1937 and the applicable CARs and shall also lay down the procedures for implementation of the same.
- 3.4 The Chief of Operations shall be overall responsible for implementation of the flight operations policy. For this purpose, the operators shall have flight operations offices at the main base and also at the regional stations exercising control on the flight operations. The operations offices shall be manned by adequate number of operations officers, flight dispatchers approved by DGCA

and other supporting staff. The strength of such officers shall have to be increased as the size of operating fleet grows.

- 3.5 The operations manual, CARs, AIP - India, Aircraft Rules, AICs, flight manual, Jeppeson manual, relevant ICAO Annexes and related guidance material, check-lists and other operations documents shall be kept up-to-date by the operations offices. The operator shall remain on the mailing list of the suppliers of these documents for the purpose of receiving regular amendments, wherever such a service is available.
- 3.6 A master folder for each type of regulatory/policy document viz. CARs, AICs, Operations Circulars, Safety Bulletins etc. shall be maintained by the operations offices for reference by crew members and other personnel.
- 3.7 Whenever any new aircraft operations requirement or circular is issued by the aircraft manufacturer, DGCA or the operator, the operations offices shall bring the same to the notice of all their concerned personnel and ensure compliance. The operations manual shall also be amended from time to time, as required.
- 3.8 There shall be a proper system of distribution of the circulars and other documents to all crew members and other concerned personnel.
- 3.9 Whenever a new crew or an operations officer is appointed, the operator shall give him/her a thorough familiarisation of the operations manual, the standing operations circulars and other relevant documents.
- 3.10 The operations offices shall have a proper system of maintaining operational and flight records of personnel and shall monitor records of each crew member (including foreign crew, if employed) in order to ensure that:
- a) the flight and duty time limitations are complied with;
 - b) their licences, instrument ratings etc. are maintained valid;
 - c) Validity of their medical checks.
 - d) all proficiency checks are carried out as per the procedures and within the stipulated periods; and
 - e) periodic refreshers are undergone as required.

For this purpose, a fool-proof system of record keeping in proper formats, preferably a computer based system, shall be established and followed.

- 3.11 All the flight crew members shall undergo periodic refresher and flight safety courses as stipulated. During the crew training and refresher courses, all the new

operations and safety circulars and bulletins, major accident/incident case studies shall be discussed.

- 3.12 The operators shall specify procedures for ensuring flight crew proficiency for :
- i) Commencement of operations after long leave/ grounding i.e. more than 30 days;
 - ii) Corrective training and checks after failure in a proficiency check.
- 3.13 The operators shall establish specific operating procedures/precautions for:
- i) Operations to critical airports of their operating network i.e. airports surrounded by hilly/difficult terrain, satellite airfields etc;
 - ii) Operations to airfields having marginal runway length;
 - iii) Operations during monsoon period; and
 - iv) Operations during winter to airfields which become fog bound.
- 3.14 The operators shall lay down and obtain DGCA approval of their airport weather minimums and ensure adherence to the same by their flight crew members.
- 3.15 Suitable alternate aerodrome for each airport on their network shall be designated by the operators, which shall meet the minimum safety and other requirements for safe operation of the aircraft type, keeping also in view the watch hours of the airport.
- 3.16 Minimum reserve fuel as laid down in AIP India shall always be carried on each flight.
- 3.17 The operators shall have facilities and doctors for carrying out pre-flight medical checks of their crew members as per the requirements. The equipment used for the purpose must be reliable to give accurate digital record of observations. It shall be calibrated frequently, at least once in a year or as per the manufacturers requirements.
- 3.18 The operators shall have, trained/qualified and DGCA approved load and trim sheet personnel at each airport for the type of aircraft operated. The operator shall ensure that in no case the aircraft is loaded beyond the maximum permissible limits determined from runway length (take-off/landing) requirement, climb and enroute obstacle clearance or any other limitation. It would be desirable that the operators should have appropriate charts for each airport giving the RTOLW at different ambient temperatures and wind conditions.

- 3.19 Only trained, qualified and DGCA approved cabin crew shall be employed and they shall undergo periodical refresher and flight safety courses.
- 3.20 The operators shall train adequate number of experienced pilots and obtain approval from DGCA for them to act as Check Pilots, Instructors and Examiners on the type of aircraft operated to carry out the training and proficiency checks of pilots and also for monitoring the flight operations. In case an operator does not have its own experienced pilots suitable for training as Check Pilot/Instructor/Examiner, the operator may use pilots of the other operators or foreign pilots approved by the DGCA to discharge these functions on the type of aircraft.
- 3.21 The operators engaged in carriage of cargo only and those authorised to carry dangerous goods, shall train adequate number of personnel in handling dangerous goods and shall ensure that all stipulated requirements with regard to packaging, handling, loading/unloading and transportation of such goods are complied with.
- 3.22 The operators engaged in over-water operations with twin engined aircraft shall ensure compliance of the requirements relating to ETOP operations.
- 3.23 The operators shall carry out regular in flight monitoring of their flight operations to ensure compliance with the operating procedures through the senior commanders and the internal safety audit team. Records of the deficiencies observed and the corrective actions taken shall be maintained.
- 3.24 In addition to other information, extensive use of the data recorded on the flight recorders (CVR/FDR) should be made by the Chief of Operations in the performance monitoring the flight crew, thus permitting early detection of safety hazards and the initiation of appropriate accident prevention measures. Corrective measures shall be taken immediately when any deficiency is observed.
- 3.25 Based on the experience of flight operations, the operators shall issue operations circulars to eliminate any weak or potentially dangerous area in their operations.
- 3.26 The operators shall prepare operational flight plan for each route including diversion sectors giving information on route navigation, fuel requirements, flight time/speed/distance between different reporting points, maximum permissible weights, airport weather minimas and other safety related information.
- 3.27 Before commencing operations to a new station, the operator shall carry out assessment of the suitability of the airport for safe operations of the type of aircraft intended to be operated particularly from the point of view of runway length and strength, one engine inoperative approach, take off and climb procedures and capability, adequacy of fire fighting and rescue facilities, clearance of enroute obstacles in case of an engine failure and the other safety related conditions. Requirements of CAR Section 3, Series 'E', Part I, shall be complied with before commencing operations to new stations.

- 3.28 In cases where the aircraft used by an operator have been procured on wet lease the operations office shall ensure compliance with the applicable operations requirements for operations with wet-leased aircraft.
- 3.29 here a foreign pilot is employed by an Operator, the operator shall ensure that the pilot has at least 500 hours experience as PIC on the type (with licence, ratings and medical current) and has adequate working knowledge of the English language, DGCA may grant exemption from this requirement in specific cases where the operator satisfies the Director General that safety will not be compromised.
- 3.30 An operator employing any foreign pilot shall obtain for him the required security clearance through DGCA before that pilot is scheduled for operations. That pilot shall also be given thorough familiarisation about Indian Rules and Regulations, operating procedures, facilities available at different airports, prohibited areas, current Notams and the operations manual of the operator. After the Chief of Operations is satisfied with and has certified the aforesaid briefing, the pilot shall be required to pass an oral check by a DGCA board and then only his licence shall be revalidated to fly Indian registered aircraft.
- 3.31 For scheduling a foreign pilot for operations upto a period of three months, the operator, in addition to fulfilling the requirements of para 3.30, shall ensure that an Indian pilot forms part of the crew complement.
- 3.32 A foreign pilot shall be permitted to operate Indian registered aircraft regularly as a line pilot for more than three months only if has passed the DGCA's written examination in Air Regulations.
- 3.33 Whenever any crew member of an operator joins another operator, that crew member shall be familiarised with the operations manual of the new operator which shall be followed by the oral check by a DGCA board before that crew member is scheduled for operations.
- 3.34 The operators shall have a system of frequent exchange of information between pilots and engineers to improve coordination and understanding of operational and airworthiness aspects. A record of such discussions shall be maintained.
- 3.35 Any differences between various aircraft of the same type in the fleet of an operator, shall be circulated to all the flight crew members. Adequate briefing should be given to them as required.
- 3.36 The operators shall emphasise to all their pilots that they should meticulously record the snags in the aircraft as and when observed.
- 3.37 While accepting an aircraft, the pilots shall ensure that snags carried forward, if any, are not beyond the scope of MEL and the aircraft is loaded within the

permissible limits of weight and seats. The engineering and commercial personnel shall also ensure compliance of these aspects respectively.

- 3.38 The operators shall prepare a Flight Safety Manual giving amongst other information, policies and procedures relating to investigation of incidents/accidents, implementation of safety recommendations, safety awareness and accident/incident prevention programmes. The Chief of Flight Safety of the operators shall be responsible for implementation of the policies laid down in their Flight Safety Manuals and all safety measures relating to their flight operations.
- 3.39 The Chief of Flight Safety shall ensure compliance with the safety recommendations made in the investigation reports, safety audit reports, spot checks etc. Proper record of such implementation shall be maintained.
- 3.40 The Chief of Flight Safety shall arrange periodic safety audits and make reports on the same. The deficiencies observed shall be brought to the notice of the concerned departments and appropriate corrective measures shall be taken promptly.
- 3.41 The operators shall take all necessary measures to implement the ICAO programme for prevention of Controlled Flight into Terrain (CFIT) accidents including the related ICAO provisions. The operators shall discuss the important operational aspects of the CFIT programme during initial and recurrent training of flight crew.
- 3.42 The operators shall make every effort to enhance accident/incident prevention measures, particularly in the areas of information feed-back and analysis, voluntary reporting system and prompt investigation of incidents and implementation of safety recommendations.
- 3.43 The operators shall take into account relevant human factors aspects when developing operating procedures and training of personnel. The operators are encouraged to engage in cooperation and mutual exchange of information on problems related to influence of human factors on the safety of aircraft operations.
- 3.44 The operators shall lay down in their Training Manuals, the policies relating to the initial and recurrent training of their flight crew and operations personnel.
- 3.45 The Chief of Training shall prepare necessary training programmes for their flight crew and other operations personnel keeping in view the background of the persons recruited and the operating requirements. Approval of the training programmes shall be obtained from DGCA before commencing the training. The Chief of Training shall also be responsible for training of Check Pilots/Instructors/Examiners as per the DGCA requirements.
- 3.46 Before sending trainees for training to any institute, the Chief of Training shall ensure that the institute has the requisite facilities and qualified and approved

Instructors and Examiners and the institute is approved by the Aeronautical Authority of the Country and also by the DGCA India for imparting such training. The training records shall be maintained and submitted of DGCA as per the standing requirements.

- 3.47 The Chief of Training shall ensure that necessary changes in the training programmes are carried out, where necessary, based on the experience and the observations made during implementation of the safety oversight programme and safety audits.
- 3.48 In case of any violation, the operator shall promptly take effective corrective action including punitive action as necessary to prevent similar occurrences in future. A record of such action shall be maintained.
- 3.49 To confirm continued capability to conduct the operations authorised under the Operating Permit, the operators shall submit to the DGCA, while applying for renewal of the Operating Permit, the following information:
- a) Continued compliance of the requirements contained in CAR Section 3, Air Transport, Series 'C' Part II for grant of permission and to operate scheduled air transport services.
 - b) Report of the in-house safety audit team of the operator on the safety audit carried out within 60 days prior to expiry of the Operating Permit and the action taken thereon.
- 3.50 The Operating Permit of any operator, shall be liable to revocation if the operator subsequently fails or is unable to meet the applicable laid down requirements during the course of its operations under the Permit.

4. IMPLEMENTATION OF SAFETY OVERSIGHT PROGRAMME OF FLIGHT OPERATIONS.

Effective safety regulation and oversight of flight operations can be achieved only by joint efforts on the part of the operators and the regulatory authority. It is, therefore, essential that in addition to the safety oversight programme of DGCA, the operators should also have their inhouse monitoring programme commensurate with the type and scale of their operations. Broadly, the safety oversight of flight operations shall be conducted on the following lines:

- 4.1 The operators shall lay down their policies and procedures for compliance of the operational, safety and training requirements in their operations manual, flight safety manual and training manual. The responsibility of implementation of the policies and procedures contained in these manuals may be assigned to their officials as indicated below:-
- a) Operations Manual - Chief of Flight Operations

- b) Flight Safety Manual - Chief of Flight Safety
- c) Training Manual - Chief of Training

The division of responsibility for this purpose shall be clearly reflected in the relevant manuals.

- 4.2 The day-to-day safety regulation and inhouse monitoring of the flight operations should be exercised by the Chief of Operations through the senior Pilots, Check Pilots, Instructors, Examiners and operations officers. Necessary check lists should be devised for carrying out such monitoring. There shall be a proper system of documentation and record keeping of the deficiencies observed and the corrective measures taken.
- 4.3 In addition to the day-to-day monitoring, periodic inhouse safety audits shall be carried out by the dedicated safety audit teams of the operators to ensure that the safety regulations are being complied with. Corrective action shall be taken immediately by the Chief of Flight Safety on the deficiencies observed during the audit. Relevant records and data in proper formats shall be maintained in this regard.
- 4.4 In order to discharge the responsibility for safety oversight in accordance with the provisions of ICAO Annex.6, surveillance of flight operations including training shall be carried out by the DGCA officers viz. Flight Inspectors, safety audit teams and other authorised officers. The Operations Manual for Flight Inspectors stipulates the method of surveillance of airline flight operations. The flight inspectors shall frequently fly with the airline pilots to carry out the surveillance in accordance with their Operations Manual. Deficiencies observed shall be intimated to the operators for corrective action. Deputy Director Flight Crew Standards in DGCA Headquarters shall ensure that necessary actions are taken on the observations made by the Flight Inspectors.
- 4.5 The DGCA safety audit teams or other authorised persons shall carry out safety audits of the operators periodically. The deficiencies observed during these audits shall be brought to the notice of the concerned operator for taking necessary corrective measures. The Director of Air Safety in the DGCA Headquarters shall take appropriate measures to ensure that necessary actions are taken by the operators to remove the deficiencies and to implement the safety recommendations. Where punitive action is required to be taken for serious lapses, the Director of Air Safety shall initiate the same promptly.

5. INDUSTRY CONSULTATION AND REVIEW OF IMPLEMENTATION OF THE SAFETY REGULATION AND OVERSIGHT PROGRAMME.

Review of implementation of the safety regulations and oversight programme shall be carried out as and when required by the DGCA Headquarters jointly with the operators to assess functioning and effectiveness of the programmes. The Deputy Director, Flight Crew Standards shall coordinate this review. This would also provide an opportunity to the operators to learn from the experience of others and to improve their own systems. During the review, it would also be assessed whether the national rules, regulations, procedures and requirements are adequate and effective in the implementation of the relevant ICAO Standards and Recommended Practices and if found necessary, appropriate amendments would be suggested.

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