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GOVERNMENT OF INDIA

OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION
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CIVIL AVIATION REQUIREMENTS

SECTION 5 – AIR SAFETY

SERIES 'C' PART I

13TH OCTOBER 2006

EFFECTIVE: FORTHWITH

Subject: Aircraft Accidents & Serious Incidents – Notification and Investigation thereof.

1 INTRODUCTION:

- 1.1 Part X of the Aircraft Manual (India) deals with the Notification and Investigation of Accidents. Rule 68 & 69 of the Indian Aircraft Rules 1937 lays down the requirements of Notification and Reporting of accidents respectively in respect of civil registered aircraft. Rule 71 of Aircraft Rules 1937 lays down the requirements of investigation of the accidents by Inspector of Accidents appointed by Director General of Civil Aviation. Rule 74 and Rule 75 of the said Rules stipulate the modalities of investigation of air accidents by Committees and Courts of Inquiry set up by the Central Government.
- 1.2 Part X-A of the Aircraft Manual (India) deals with the Notification and Investigation of Incidents. Rule 77 B deals with the Notification of incidents and Rule 77 C deals with the Investigation of an incident.
- 1.3 This part of Civil Aviation Requirements is issued under the provisions of Rule 133A of the Aircraft Rules, 1937 and Section 5A of the Aircraft Act, 1934. It specifies the manner in which the aircraft accidents and incidents are to be notified, guidelines & modalities to be adopted for classification, investigation thereto and the responsibilities of various organisations like the Operators and other Departments/ agencies at the airport etc. in providing assistance with regard to investigation.
- 1.4 Annex 13 to the Convention on International Civil Aviation, which is followed in India being a contracting State of Chicago Convention lays down the International Standards and Recommended Practices for Aircraft Accident and Incident Investigation. This CAR also elaborates the actions required to be taken by various agencies in India as per the Standard and Recommended Practices of the above Annex.

2. APPLICABILITY:

This CAR applies to all the occurrences including **Serious Incidents** involving Civil Registered aircraft in India. It also applies to accidents/ serious incidents to foreign civil registered aircraft occurring in India and is to be investigated in accordance with proviso to Annex 13 of ICAO.

For easy stipulation and understanding, the requirements in this part of the CAR have been classified as applicable to All Scheduled, Non- Scheduled, Aerial work aircraft, State Government / BSF aircraft & private aircraft operators and flying clubs.

3. DEFINITIONS:

Accident: An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

- a) a person is fatally or seriously injured as a result of:
- being in the aircraft, or
 - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
 - direct exposure to jet blast,

except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

- b) the aircraft sustains damage or structural failure which:
- adversely affects the structural strength, performance or flight characteristics of the aircraft, and
 - would normally require major repair or replacement of the affected component,

except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or

- c) the aircraft is missing or is completely inaccessible.

Accredited representative: A person designated, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State.

Adviser: A person appointed, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

Aircraft: Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Causes: Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident.

Flight recorder: Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation process.

Incident: An occurrence, other than an accident, associated with the operation of an aircraft, which affects or could have seriously affected the safety of operation leading to an accident.

Investigation: A process conducted for the purpose of accident prevention, which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations.

Inspector of Accidents: A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation under Rule 71 of the Indian Aircraft Rules 1937.

Operator: A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Preliminary Report: The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

Safety recommendation: A proposal of the accident investigation authority of the State conducting the investigation, based on information derived from the investigation, made with the intention of preventing accidents or incidents.

Serious incident: An incident involving circumstances indicating that an accident nearly occurred.

Serious injury: An injury which is sustained by a person in an accident and which:

- a) requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

State of Design: The State having jurisdiction over the organization responsible for the type design.

State of Manufacture: The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

State of Occurrence: The State in the territory of which an accident or incident occurs.

State of the Operator: The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

State of Registry: The State on whose register the aircraft is entered.

4. NOTIFICATION

- 4.1 It is true that the definition of an incident is not specific, but it is important to bear in mind that occurrence becomes reportable, **“if it endangers or if not corrected would have endangered the aircraft, its occupants or any other person”**. This criteria is to be used at all times.
- 4.2 It is incumbent that the notice and information of occurrence as stipulated in the Rules shall be sent as soon as possible by the quickest means available and in any case within 24 hours by the person in command of the aircraft or if he be killed or incapacitated the owner, operator, the hirer or other persons on whose behalf he was in command of the aircraft to the a) Director General of Civil Aviation (Attn: Director Air Safety, Hqrs.), the Regional Air Safety Office(s) where the Operator is based **and** where the location of the occurrence falls and b) information to District Magistrate and the Officer In-charge of the nearest police station.
- 4.3 The format and the content of the accident information should be as given in the Procedures Manual for Aircraft Accident/Incident investigation of DGCA. The notification shall be in plain language and contain as much of the information as is readily available but its dispatch shall not be delayed due to the lack of complete information. As soon as it is possible to do so, the details omitted from the notification as well as other known relevant information shall be dispatched to Director General of Civil Aviation (Attn: Director Air Safety, Hqrs.) and its respective Regional Air Safety Offices. Telephone, facsimile, e-mail or the Aeronautical Fixed Telecommunication Network (AFTN) will in most cases constitute “the most suitable and quickest means available”. This information for DGCA addresses may be obtained from the DGCA Website **<http://dgca.gov.in>**. More than one means of communication may be used.
- 4.4 On the basis of preliminary information on the damage/injuries received from the site, Deputy Director General Civil Aviation heading Air Safety Directorate in headquarters will classify it as incident, serious incident or accident.
- 4.5 In case of accident/serious incident, Air Safety Directorate (Hqrs.) shall forward the information as much as received within a period of 5 working days of occurrence to the State of Manufacture, the State of Design/State of Operator (if not India), the State which have a special interest in an accident/serious incident by virtue of fatalities or serious injuries to its citizens and ICAO as per format contained in ICAO Annex 13.

4.6 The details omitted, if any, from the notification as well as other known relevant information shall be dispatched as soon as it is possible to do so, to the State of Manufacture, the State of Design/State of Operator (if not India), the State which have a special interest in an accident/ serious incident by virtue of fatalities or serious injuries to its citizens and ICAO.

4.7 In case of the foreign registered aircraft, the information shall also be sent to State of Registry and the State of the Operator and the States, which have a special interest in an accident/ serious incident by virtue of fatalities or serious injuries to its citizens.

For accidents or serious incidents to aircraft of a maximum certificated take-off mass of over 2 250 kg, the notification shall also be sent to ICAO.

A list of addresses of aircraft accident and incident investigation authorities of States to whom such Notification is required to be sent can be found in the ICAO Manual of Aircraft Accident and Incident investigation, Part I – Organization and Planning (Doc 9756).

The State of the Operator shall also be requested to intimate the presence and description of dangerous goods on board the aircraft, if any.

The State of Registry, State of Operator, State of Design or State of Manufacturer shall each be entitled to appoint an accredited representative to participate in the investigation. These States may appoint one or more advisers, proposed by the operator, to assist its accredited representative.

4.8 In case an aircraft which is registered in India, or, having Indian Design or Type Certificate, or, belongs to an Indian Operator, has met with an accident / serious incident outside India and a notification is received from the accident investigation authority of the State of Occurrence, Director Air Safety (Hqrs.) shall as soon as possible

- acknowledge receipt of the notification;
- provide the State of Occurrence with the available relevant information requested;
- inform the State of Occurrence whether or not it intends to be present at the investigation;
- provide the names and titles of the accredited representative and technical advisers and the expected date of their arrival at the accident site or at the headquarters of the accident investigation authority in the State of Occurrence.

4.9 In addition to the statutory responsibility of notification is as given in para 4.1 above, the Regional offices of the Civil Aviation Department and ATC units of Airports Authority of India, are expected to report to the Director General of

Civil Aviation (Attn: Director Air Safety, Hqrs.), any such occurrence which comes to their knowledge.

5 INVESTIGATION:

The sole objective of the investigation of an accident or incident shall be the prevention. It is not the purpose of this activity to apportion blame or liability.

For the investigation of **Accident and/or Serious Incidents** in India the Procedures Manual of Aircraft Accident/ Incident investigation may be referred.

5.1 For **accidents**, the Director-General may order the investigation under Rule 71, by general or special order & appoint any person for the purpose of carrying out such investigation.

5.2 On receipt of accident information & other details, the Inspector of Accidents appointed under Rule-71 of the Indian Aircraft Rules, 1937 by DGCA should immediately proceed to the site of accident to conduct the investigation. In case a Committee of inquiry under Rule-74 or the formal investigation (Court of inquiry) under Rule-75 is ordered by Government to carry out a particular accident investigation which normally takes some time to set up after the accident date, the Inspector of Accidents who had already commenced onsite investigation work shall proceed with the investigation as is required on instructions from Committee/Courts of Inquires and shall assist the Committee or the Court as the case may be with all the relevant factual information.

5.3 Depending on the size & complexity of the investigation, nature of accident and investigation skills available, **DGCA (Hqrs.) may constitute appropriate groups as contained in guidelines on ICAO Doc 9756 Vol I after obtaining information from site and analyzing the preliminary information and evidences on the accident.** The groups so constituted would assist Inspector of Accidents appointed under Rule-71 of Aircraft Rules and render their report on involved aspects in writing to him including the evidences in original.

The final investigation report shall be submitted by the Inspector of Accident, taking into consideration the reports of the various groups assisting him in the investigation. During the investigation there would be continuous liaison between the Inspector of Accidents and group leader(s). The Inspector of Accidents shall be responsible for submitting the final report to DGCA (Hqrs) within the time schedule laid down in the order of appointment of Inspector of Accidents. In the event the report submission is delayed the Inspector of Accidents shall in advance submit a report giving present status of investigation and reasons for delay.

5.4 In addition the Director-General may order the investigation of any **serious incident** involving an aircraft or a person associated with the maintenance and operation of aircraft, or both, and may, by general or special order,

appoint a competent and duly qualified person having experience in aviation accident/incident investigation as Inquiry Officer under Rule-77C of Aircraft Rules for the purpose of carrying out such investigation.

- 5.5 The above investigating authorities shall have independence in the conduct of the investigation and have unrestricted authority over its conduct. The investigation shall include:
- a) the gathering, recording and analysis of all available information on that accident or incident;
 - b) if appropriate, the issuance of safety recommendations;
 - c) if possible, the determination of the causes; and
 - d) the completion of the final report.

The scene of the accident/serious incident shall be visited, the wreckage examined and statements taken from witnesses.

- 5.6 It shall be the responsibility of the Operator/Ground Handling Agent of the operator/Airports Authority/Police to provide necessary assistance and the information required thereon to the relatives of the victims/survivors as per ICAO guidelines.

Though the provision of family assistance should be separate from accident investigation, however accident investigators may provide to the families and survivors the information on issues of immediate concern such as the release of human remains and personal effects held apart of the investigation, information on the progress of the investigation in determining the causes of the accident and any safety recommendations being contemplated to prevent similar accidents.

- 5.7 Incidents other than the serious incidents shall be investigated by the Permanent Investigation Board of the Airlines under supervision of Officer of the Regional Air Safety Offices. The attendance of a representative of Regional Air Safety Office in PIB meetings is mandatory and the minutes of the meetings to be maintained in the office for reference purpose.

6 PROTECTION/ PRESERVATION OF WRECKAGE/EVIDENCES:

- 6.1 DGCA Regional Office(s)/The Officer In-charge of Aerodromes closest to the site of accident/ Serious Incident in coordination with Local Police Authorities shall take immediately all reasonable measures to protect the evidence and to maintain safe custody of the aircraft including parts thereof and its contents until the arrival of the Inspector of Accidents/ Inquiry Officer at the scene whenever accident/serious incident occurs at a place under their jurisdiction. Normally, the action taken for arranging for guarding of the wreckage include the preservation, by photographic or other means of any evidence which might be removed, effaced, lost or destroyed. (Ref: Air Safety Circulars on role of police already circulated to all State Administration)

- 6.2 All the documents relating to the aircraft and its personal (to include ATC/CNS documents) also fire services shall be segregated and sealed by the Operator and shall be handed over to DGCA Officers who shall determine the adequacy of action as deemed appropriate and may seal any other documents etc. pertinent to the investigation of the accident as any of the material could be of use to the investigating authority. The broad outlines of the records, which should be segregated and sealed immediately as soon as possible after the accident/serious occurs are given in the Procedures Manual for Aircraft Accident/Incident investigation of DGCA.
- 6.3 The assistance of civil authorities, particularly that of local police is necessary to ensure that vital evidence is not lost. The Inspector of Accidents/ Inquiry Officer or any other authorized person shall co-ordinate with the police authorities/ Local Government Authorities to initiate action to extricate persons from the aircraft, to arrange for immediate first aid and medical attention, to extinguish fire and removal of the persons dead or alive from the wreckage. The examination and identification of victims if required should be carried out in coordination with the local police authorities
- 6.4 The DGCA Regional Office(s)/The Officer In-charge of Aerodromes closest to the site of accident/Serious Incident and Police authorities shall ensure that the Captain and the Co-pilot are immediately subjected to medical check up for consumption of alcohol. The doctors carrying out such a medical check up shall take sample of blood, urine etc. as required for detailed chemical analysis.
- 6.5 In the event of death of the crewmembers, complete autopsy examination of fatally injured flight crew and, subject to the particular circumstances, of fatally injured passengers and cabin attendants shall be carried out. These examinations shall be expeditious and complete. The police authorities shall ensure that the bodies are subjected to these examinations as per Air Safety Circular 3 of 1984 issued to all State/District level offices in the state Government.
- 6.6 If appropriate the Medical examination of the surviving crew, passengers and involved aviation personnel, should be carried out by a physician, preferably experienced in accident investigation. These examinations should be expeditious.
- 6.7 The officer of Director General Medical Services (DGMS) DGCA (Hqrs.) shall be associated in the Post Mortem(s) examination and he shall give the reports as in 5.8.5 and 5.8.6 above to the Inspector of Accidents.
- 6.8 While rescuing the injured crewmembers, their identification and location in or around the aircraft must be carefully observed and recorded. In case the pilot and/or copilot being found dead, the necessary photographs must be taken in-situ prior to the removal. The removal action should be such as to cause minimum of disturbance to the aircraft wreckage/parts and any such disturbance should be fully recorded. The location of the passengers should also be recorded immediately during rescue operation. **However, removal of**

the injured to the nearest hospital must not be delayed for want of formalities with regard to the recording as stated above.

- 6.9 All the parts of the aircraft or relevant material picked up from the wreckage should be preserved and recorded on a sketch. The positions at which the flight data and voice recorders are found if installed on the aircraft should be recorded on a sketch.
- 6.10 After preliminary observations at the accident/ incident site, the wreckage should be shifted to a safer site for further examination. Owner / Operator of the aircraft shall make all the arrangements to get the wreckage shifted under supervision of the Inspector of Accident/ Inquiry Officer.

7 DISCLOSURE OF RECORDS:

- 7.1 Following records shall not be disclosed or made available to anybody for purposes other than accident or incident investigation:
- a) all statements taken from persons by the investigation authorities in the course of their investigation;
 - b) all communications between persons having been involved in the operation of the aircraft;
 - c) medical or private information regarding persons involved in the accident.
 - d) cockpit voice recordings and transcripts from such recordings; and
 - e) Recordings and transcriptions of recordings from ATC units and
 - f) opinions expressed in the analysis of information, including flight recorders information.
 - g) Any other document classified as “evidence”.
- 7.2 These records shall be included in the final report or its appendices only when pertinent to the analysis of the accident or incident. **Parts of the records not relevant to the analysis shall not be disclosed/included in report.**

8. SUBMISSION OF REPORT (S):

- 8.1 Preliminary report by the Inspector of Accidents/ Inquiry Officer should be finalized within ten days of the accident as stipulated in the appointment order and in the format of ICAO and provided in procedure manual for Aircraft Accident/Incident investigation of DGCA. It shall contain the requisite information including any safety hazard, either in human factor, Aircraft factor and/or any other relevant factor that is prima facie evident during the early stages of investigation such as lack of piloting proficiency if any or any unwarranted disregard of safety requirements, in case these are obvious to enable framing and implementation of immediate corrective safety measures.

- 8.2 The Final investigation report should be finalized in the format as stipulated in ICAO doc 9756 and provided in procedure manual. The report should be self-contained in respect of its text. The body of the final report should comprise the Factual Information; Analysis; Conclusions & Safety Recommendations. The causes should include both the immediate and the deeper systemic causes. The recommendations should be for the purpose of accident prevention and any resultant corrective action.
- 8.3 Identity of involved crews/personnel shall not be disclosed in investigation report/or in any appendices attached thereto.
- 8.4 The findings of the report should primarily flow out of the analysis and the conclusions, recommendations should also be drawn out of the findings as directly relevant to accident/incidents.

9. REOPENING OF INVESTIGATION:

If, after the investigation has been closed, new and significant evidence becomes available, the same will be brought to the knowledge of DGCA for consideration & re-opening of the investigation if need be if found expedient orders for reopening of investigations carried out by Inspector of Accidents/Inquiry Officer may be issued by DGCA.

In case of earlier investigations carried out by Court/Committee of Inquiry, necessary orders may be issued by Central Government. However, when the earlier investigation was not instituted by Indian Central Government/ DGCA's consent of the State shall be obtained which institutes the investigation afresh.

10. Whenever an investigation into an accident is ordered by the Central Government to be carried out by Court/ Committee of Inquiry in accordance with the Aircraft Rules, a copy of this CAR, Procedure Manual and other relevant documents pertaining to investigation shall also be presented to the Court/Committee of Inquiry for their reference as required.



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