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GOVERNMENT OF INDIA  
OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION  
TECHNICAL CENTRE, OPPOSITE SAFDRJUNG AIRPORT, NEW DELHI

**CIVIL AVIATION REQUIREMENTS**  
**SECTION 3 – Air Transport**  
**SERIES 'C', PART XII**  
**23<sup>rd</sup> March, 2015**

**EFFECTIVE: FORTHWITH**

**Subject: Requirements for operation of Air Ambulance services by non-scheduled operators.**

## **1. Introduction**

Air ambulance service is one where the aircraft is used to facilitate emergency medical assistance where immediate and rapid transportation is essential, by carrying medical personnel, medical supplies and/or ill or injured persons from/to hospital. Air ambulance service is considered to be a commercial air service, which needs to be regulated to ensure safe aircraft operations.

Rule 134A of the Aircraft Rules, 1937 specifies that no person shall operate any non-scheduled air transport service from, to, in, or across India except with the permission of the central government. This Civil Aviation Requirement contains minimum requirements for air ambulance operations.

This CAR is issued under the provisions contained in Rule 133A of the Aircraft Rules, 1937.

## **2. Definitions**

Air ambulance service                      Service conducted for air transport of patient(s) from one location to another.

Medical equipment                          Equipment and supplies which shall be required for

conducting an air ambulance service for the medical care of a patient.

Medical personnel

Doctor(s) and nurse(s) for providing on-board medical care.

### **3. Applicability**

The provisions of this CAR shall be applicable to Air Ambulance flights operated with single or multi engine aeroplanes and helicopters duly certified/ accepted by DGCA in accordance with the Type Certificate issued by FAA/EASA or other authorities acceptable to DGCA, and under conditions, if any, as stipulated by DGCA.

### **4. Requirements**

#### **4.1 General Requirements**

4.1.1 Requirements with regard to eligibility, procedural aspects, preparedness for import/acquisition of aircraft, issuance of permit, continued operation, general conditions, penal provisions, etc. shall be as contained in CAR Section 3 Series C Part III.

4.1.2 Requirements with regard to Helicopter Emergency Medical Services (HEMS) shall be as contained in CAR Section 8, Series H, Part I unless otherwise specified in this CAR.

#### **4.2 Medical Equipment Requirements**

4.2.1 The following medical equipment and supplies (applicable for both fixed-wing aircraft and helicopter) shall be provided on board the aircraft and shall be stored and secured within the flight compartment by suitable restraints.

- a) Stretcher with at least two sets of restraining straps.
- b) Medical oxygen capable of adjustable flow from 2 to 15 liters per minute.

4.2.2 Stretchers and oxygen bottles installed on the aircraft must comply with the applicable requirements contained in Federal Aviation Regulation (FAR)/Certification Specification (CS) 23/25/27/29.

4.2.3 Medical equipment (including stretcher) shall be secured in order to sustain inertia forces experienced during aborted take-off and/or emergency landing in accordance with applicable requirements contained in FAR/CS 23/25/27/29.

4.2.4 Installation of medical equipment including the stretcher and restraint system shall be done through supplemental type certificate (STC) approval process.

4.2.5 Reports on electrical load analysis and EMI/EMC test shall be provided along with the application for STC approval.

4.2.6 Any other portable medical equipment viz. electrocardiographic monitor/recorder, defibrillator, infusion pumps, pulse oximeter, portable suction units, intubations equipment, respirator/ventilator, incubator, etc. using its own power through rechargeable lithium-ion batteries shall be RTCA (Radio Technical Commission for Aeronautics) approved.

4.2.7 Dead weights used on ground for traction purpose shall be replaced with spring type devices.

4.2.8 Infusion devices, if used on board the aircraft, shall be automated and designed not to be dependent on gravitational flows.

#### 4.3 Aircraft Requirements

4.3.1 The fixed-wing aircraft used for air ambulance service shall comply with all applicable CARs for the type of operation and aircraft, and shall be designed for the provision of patient care as follows:

- a) Aircraft doors shall accommodate passage without rotation of more than 30° roll or 45° pitch.
- b) At least 30 inches (76 cm) of vertical head space shall exist above the head of the stretcher with sufficient attendant access without obstruction.
- c) Lighting for the patient area shall be adequate for patient care by medical personnel.

4.3.2 The electrical system of the aircraft shall be capable of supporting all of the ancillary equipment without the threat of overload or systems failure.

4.3.3 In case of helicopters performing air ambulance service, the door size should be sufficient for smooth entrance of a patient lying on a stretcher. Vertical head space shall exist above the head of the stretcher with sufficient attendant access without obstruction.

4.3.4 An approved restraining strap for each patient and additional restraining device for a child who will not be adequately restrained with the restraining strap, if applicable.

#### 4.4 Flight Crew Requirements

4.4.1 The flight crew of an aircraft engaged in air ambulance operations shall –

- a) at least be a holder of valid commercial pilot license with instrument rating appropriate to the category and type of air ambulance aircraft; and

- b) have undergone appropriate training and demonstrated minimum competency as required under applicable CARs.

#### 4.5 Medical Personnel Requirements

The Operator shall ensure that

4.5.1 The medical personnel on board air ambulance viz. doctor and/or nurse shall hold current certification as appropriate in their profession adequate for the care of patient with specific illness.

4.5.2 The medical personnel shall have a minimum of two years' experience in critical care.

4.5.3 At least one of the medical attendant onboard shall have undergone training in aviation medicine.

4.5.4 The medical personnel shall be familiar with the meteorological weather conditions, precautions to be observed during emergency landing or ditching, patient evacuation, turbulence problems with patient seat belt and traction devices, effects of noise and vibration on the ill or injured, etc.

#### 4.6 Manual Requirements

4.6.1 The Company Operations Manual shall contain at least the following information, as applicable for the aircraft type:

- a) Approved method of restraining the medical equipment and the patient.
- b) Procedure for installation of medical equipment.
- c) Patient orientation relative to the aircraft axis.
- d) Duties and responsibilities of medical attendant.
- e) Person responsible to restraint medical equipment and the patient in the aircraft.
- f) Procedure to ensure that required medical equipment is adequately restrained.
- g) Evacuation procedures including passenger and on board medical equipment.
- h) Maximum number of patients to be carried on board the aircraft.

#### 4.7 Safety Requirements

4.7.1 All safety precautions shall be observed during operation of onboard portable medical equipment containing lithium-ion batteries due to overheat which results in thermal runaway.

4.7.2 When an air ambulance transports dangerous goods, provisions contained in the Aircraft (Carriage of Dangerous Goods) Rules, 2003 shall be strictly adhered to.

4.7.3 The onboard medical equipment shall be positioned in such a way so as to:

- a) allow medical personnel a clear view of, and access to the patient to perform monitoring and therapeutic intervention as needed;
- b) not to block access to normal and emergency exits;
- c) not to interfere with any operation of any aircraft controls; and
- d) not to restrict access to any emergency equipment.

4.7.4 The on board medical equipment, supplies or other items on board of the aircraft shall be properly secured and so positioned that they do not or are not likely to cause injury to any person on board of the aircraft.

4.7.5 The operator shall ensure that the attachment of medical equipment to the aircraft structure shall allow its rapid detachment for evacuation.

4.7.6 When the aircraft has been utilized to transport a patient known to have a communicable disease, the aircraft shall be cleansed and all contact surfaces be disinfected before undertaking next flight.

#### 4.8 Training Requirements

4.8.1 Safety and emergency procedures training relevant to the aircraft type shall be provided to all personnel engaged in air ambulance services in accordance with provisions of CAR Section 7, Series M, Part I.

4.8.2 The duration of such training shall be for a minimum period of eight hours.

### **5. Compliance with Regulations**

Degradation of the operator's capability below the required level or breach of any of the provisions of this CAR or of any provisions of Aircraft Act, 1934, Aircraft Rules, 1937, Civil Aviation Requirements, orders/directions issued under the said act or rules and as amended from time to time, shall render the Operating Permit liable to alteration, suspension or cancellation. Additionally, action may also be taken as per the provisions of Schedule VI of the Aircraft Rules, 1937.

(Smt. M. Sathiyavathy)  
Director General of Civil Aviation