

# MOZAMBIQUE CIVIL AVIATION TECHNICAL STANDARDS



## PART 138

### AIR AMBULANCE OPERATIONS

**LIST OF EFFECTIVE PAGES**

The list of effective pages below will be used to assist in keeping track of revisions and updates to the Mozambique Civil Aviation Technical Standards (MOZ-CATS). The list shows the number of the last revision for each page of the Mozambique Civil Aviation Technical Standards. Accordingly, with each revision to the Mozambique Civil Aviation Technical Standards a new list of effective pages will be published and distributed to all Mozambique Civil Aviation Technical Standards holders.

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## **1. Purpose**

Document MOZ-CATS-OPS 138 contains the standards, rules, requirements, methods, specifications, characteristics and procedures which are applicable in respect of air ambulance operations.

Each reference to a technical standard in this document, is a reference to the corresponding regulation in the Mozambique Civil Aviation Regulations, for example, technical standard 138.04.2 refers to regulation 2 of Subpart 04 of Part 138 of the Regulations.

The abbreviation “CAR” is used throughout this document when referring to any regulation. The abbreviation “TS” refers to any technical standard.

## **3. Schedules and notes**

Guidelines and recommendations in support of any particular technical standard are contained in schedules to, and/or notes inserted throughout the technical standards.

### **138.03.1 TRAINING OF FLIGHT CREW, MEDICAL PERSONNEL AND OPERATIONS PERSONNEL**

#### **1. Initial training of flight crew**

- (1) Flight crew members engaged in air ambulance operations must successfully complete a course of instruction prior to undertaking flying duties. The course must include the following subjects:
  - (a) an overview of the way in which air ambulance operations function, their purpose and limitations;
  - (b) orientation to infection control;
  - (c) a basic knowledge of the medical and rescue equipment carried in the aircraft;
  - (d) a basic understanding of patient transport consideration including stabilization, preparation and handling;
  - (e) patient loading and unloading procedures;
  - (f) hot-loading policy and hot-unloading procedures
  - (g) emergency medical service communication procedures;
  - (h) aircraft emergency procedures pertaining to air ambulance flights, securing oxygen, securing loose equipment and patient evacuation;
  - (i) requirements for use of unprepared or unlit landing sites; and
  - (j) an overview of the training courses the operator supplies to medical personnel and operations personnel.

- (2) Flight crew members engaged in air ambulance operations must successfully complete operational training, which must include:
  - (a) terrain and weather considerations peculiar to the area;
  - (b) specific knowledge of the manual of procedure of the operator; and
  - (c) in the case of helicopter flight crew: review of landing sites at referring and receiving hospitals.

## **2. Recurrent training of flight crew**

- (1) The syllabus of the recurrent training course must cover the same subject matter as contained in the initial training course contemplated in TS 138.03.1.1.
- (2) The amount of training required by the recurrent training course is determined after due note has been taken of the flight crew member's previous training, competency and experience, but shall include any relevant new developments in air ambulance operations and emergency medical procedures.

## **3. Initial training of medical personnel**

Medical personnel members engaged in air ambulance operations must successfully complete a course of instruction prior to undertaking flying duties, and such course must include the following:

- (1) General knowledge
  - A medical personnel member must receive instruction on:
    - (a) all aircraft types operated by the air ambulance operator, their capacity, performance, range, capabilities, as well as aircraft handling (ground);
    - (b) aircraft pressurization aspects;
    - (c) introduction to aviation, air traffic control, navigation procedures;
    - (d) emergency medical service communication procedures;
    - (e) the manual of procedure of the operator;
    - (f) dress;
    - (g) insurance cover provided by the operator, if any, and additional cover available in the market;
    - (h) different responsibilities of the flight crew and medical personnel and authority of the pilot-in-command;
    - (i) overdue actions – emergency plans;
    - (j) communications in an emergency;
    - (k) basic survival instructions;
    - (l) a clear understanding of the day and night flying limitations;
    - (m) a basic understanding of aerodrome and heliport requirements;
    - (n) requirements for use of unprepared or unlit landing sites; and

- (o) crowd control and flight crew and medical personnel duties.

(2) Definite knowledge

A medical personnel member must receive instruction on:

- (a) danger areas around the aircraft;
- (b) standard helicopter and aeroplane safety rules;
- (c) look-out assistance for obstructions, wires and debris;
- (d) location and operation of safety equipment, fire extinguishers, emergency exits and ELT;
- (e) location and operation of aircraft electrical master switches and fuel shut-off valves;
- (f) location and operation of oxygen emergency shut-off valves;
- (g) correct stowage of medical equipment;
- (h) patient loading and unloading procedures;
- (i) hot-loading policy and hot-unloading procedures; and
- (j) aircraft emergency procedures pertaining to air ambulance operations, securing oxygen, securing loose equipment, set belts, forced-landing drills and patient evacuation.

**4. Recurrent training of medical personnel**

- (1) The syllabus of the recurrent training course shall cover the same subject matter as contained in the initial training course contemplated in TS 138.03.1.3.
- (2) The amount of training required by the recurrent training course is determined after due note has been taken of the medical personnel member's previous training, competency and experience, but shall include any new developments in air ambulance operations and emergency medical procedures.

**5. Initial training of operations personnel**

Operations personnel engaged in air ambulance operations must successfully complete a course of instruction prior to undertaking duties, and such course must include the following:

- (1) All operations personnel
  - (a) general knowledge regarding helicopter and aeroplane types, their capacity, performance, range and capabilities;
  - (b) danger areas around the aircraft;
  - (c) standard safety rules;
  - (d) location and operation of safety equipment, fire extinguishers and emergency exits;

- (e) patient loading and unloading procedures;
  - (f) hot-loading and hot-unloading procedures;
  - (g) overdue actions;
  - (h) a clear understanding of the day and night flying limitations; and
  - (i) requirements for the use of unprepared or unlit landing sites, including the effect of dust, rubbish, obstructions and wires.
- (2) Radio operators and dispatchers
- Radio operators and dispatchers must receive additional training on:
- (a) introduction to aviation, air traffic control and navigation procedures;
  - (b) emergency medical service communications procedures;
  - (c) the manual of procedure of the operator; and
  - (d) emergency plans.

**6. Recurrent training of operations personnel**

- (1) The syllabus of the recurrent training course shall cover the same subject matter as contained in the initial training course contemplated in TS 138.03.1.5.
- (2) The amount of training required by the recurrent training course is determined after due note has been taken of the operation personnel member's previous training, competency and experience, but shall include any new developments in air ambulance operations and emergency medical procedures.

**138.04.2 MANUAL OF PROCEDURE**

**1. Structure and contents**

- (1) The manual of procedure must contain specific policies and procedures regarding aircraft operations in the following areas-
  - (a) patient loading and unloading procedures;
  - (b) protocols for hot loading and unloading, if applicable, refueling with the rotors or propellers turning;
  - (c) refueling with medical personnel and/or patient on board, hearing protection for medical personnel;
  - (d) use of safety equipment, such as flame retardant clothing;
  - (e) use of seat belts and shoulder harnesses by medical personnel, infection control, and
  - (f) records of personnel health or immunization status.

- (2) The manual of procedure must contain a recurrent training programme for flight crew

members, medical personnel and operations personnel.

## **138.06.2      DISPATCHING BASE**

### **1.      Operations centre**

The operation centre must provide for the following:

- (a) 24-hour access to the operation centre;
- (b) telephone line;
- (c) facsimile line;
- (d) ability to communicate with the aircraft as described in CAR 138.05.3;
- (e) maps of the area of operation; and
- (f) a database of the contact numbers of emergency medical services, police, fire and traffic departments in the area of operation;
- (g) a log sheet system or method to record all communications and actions related to operations; and
- (h) contact details of the operator's aero-medical advisor.