

Notice of Proposed Rule Making of Amendment of JCARs Part-138

NPRM : Reg. 5/2019

Release Date: 17/11/2019

This NPRM will be of interest to those who intend to provide Air Ambulance Services within :

- Current holders of Air Operator's Certificate (AOC).
- Prospective operators under Parts OPS1 and OPS 3.

CARC is responsible under the Civil Aviation law 41 of 2017 and its amendments , amongst other functions, for developing and promulgating appropriate, clear and concise aviation safety standards. In the performance of this function and the exercise of its powers, CARC must, where appropriate, consult with government, commercial, industrial, consumer and other relevant bodies and organizations.

This Notice of Proposed Rule Making (NPRM) is issued by CARC with a view to ensuring that JCARs aviation safety requirements are current and appropriately address safety risks.

CARC policies require that the aviation safety regulations must:

- be necessary to address known or likely safety risks
- provide for the most efficient allocation of Industry and CARC resources
- be clear and concise
- where appropriate, be aligned with international standards.

The purpose of this NPRM is to advise the public and aviation community of CARC's intent to regulate, to the greatest extent practicable, **Air Ambulance services** to the same safety standards that are currently applicable to AOC operations. This will extend to adoption of AOC certification requirements, operating standards and maintenance standards.

The NPRM outlines a new and updated requirements that specifically categorizes Air Ambulance services so that they operate under the requirements of an AOC (issued under Parts OPS1 of JCAR) and other applicable operational rules in JCARs

CARC considers that Part OPS1 with its robust operator management systems, should be implemented by (and integrated into) these essential passenger transport services. This policy and change of classification is based on CARC's recognition that the focus of these operations is primarily passenger-carrying in nature, albeit in a highly specialized manner, and conforms more closely to international norms for the conduct of these operations.

However, CARC acknowledges that, in some cases, applying all of the Air Transport Operations suite of standards to air ambulance flights would not be practicable. Due to the highly specialized nature of helicopter air ambulance flights, some of the rules in these operational Parts will not apply and other requirements that are not characteristic of normal air transport operations will be addressed specifically for air ambulance flights. So REGULATION OF HELICOPTER AIR 'AMBULANCE SERVICES AS AIR TRANSPORT OPERATIONS will be postponed to later stage

I would like to thank you for expressing interest in this proposal. I emphasize that no rule changes will be undertaken until all NPRM responses and submissions received by the closing date 17 January 2020 have been considered

The CARC encourages comments concerning these changes to be directed to the following address:

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Subpart-A General

138.1 Applicability.

This Part:

- (a) Prescribes the standards and requirements for any air ambulance services authorization and the general operating rules for holders of the authorization; and
- (b) Establishes the minimum acceptable standards of service to common sector in the **Fixed -Wing** categories, and medical care units for specialized transport systems.

138.3 Scope.

This part applies to any service in Jordan that transports by air persons requiring medical care including, but not limited to:

- (a) Basic life support (BLS)
- (b) Advanced life support (ALS)
- (c) Critical care; or
- (d) Specialty care.

138.5 Definitions.

For the purpose of this part the following terms are defined according to their use in this part:

Advanced life support (ALS): means advanced pre- hospital and inter facility care and treatment, as authorized by regulation, which may be performed only by a person licensed by the Ministry of Health as emergency medical technician paramedic, or licensed by the Armed Forces Medical Core.

Air Ambulance: An aircraft used in air ambulance operations. The aircraft need not be used exclusively as an air ambulance aircraft, and the equipment need not be permanently installed.

Air Ambulance Service: means any governmental or private service that provides air transportation specifically designed to accommodate the medical needs of a person who is ill, injured or otherwise mentally or physically incapacitated and who requires in-flight medical supervision.

Aircraft type: means a particular make and model of or fixed wing aircraft.

Aircraft operator: means the person(s) who operates and maintains the aircraft utilized by an air ambulance service.

Basic life support (BLS): means the medical and equipment required to provide basic life support to patients.

Critical care: means pre-hospital or inter-facility care and treatment, respectively, that exceeds the advanced life support level of care.

Critical care air ambulance service: means an organization certified by the (CARC) to transport patients in an air ambulance that requires critical care.

Level of service: means the highest level at which the air ambulance service is certified.

Medical director: means a physician who has the responsibility for oversight of patient care of an Emergency Medical Service system or provider service, including providing for or ensuring the medical control of emergency medical technicians, the development, implementation, and evaluation of medical protocols, and quality assurance activities.

Physician: means a doctor of medicine or doctor of emergency and accident, who is licensed or otherwise authorized to practice medicine in Jordan by Ministry of Health.

Protocol: means a predetermined, written medical care plan and includes standing orders.

Provider: means a person who has been licensed by the appropriate agency to provide patient care at the ALS, critical or specialty care level.

Specialty care: means care and treatment that exceeds the advanced life support level of care. The specialty care mission shall consist of at least one specialty care provider and at least one additional provider which shall be licensed at or above the ALS level of care, and/or specialty trained in the area of care required.

Specialty care provider: means a care giver appropriately trained and licensed to provide care as defined by the mission.

138.7-138.10 Reserved.**Subpart-B
Certification Requirements****138.11 Required Certificates.**

No person(s) shall operate an air ambulance in Jordan unless the person(s) has a current and valid air ambulance service authorization.

138.13 Eligibility for air ambulance service authorization.

(a) To be eligible for an air ambulance service authorization, an applicant shall:

(1) Hold the following approval(s) issued by the Civil Aviation Regulatory Commission (CARC);

(i) A Current and valid Air Operator Certificate authorizing common carriage under JCAR- Parts OPS1 or OPS3.

(ii) A Current and valid operations specifications for authorizing air ambulance operations.

(iii) Current and valid certificate of Registration for each air ambulance to be operated; and

(iv) A Current and valid Airworthiness certificate for each air ambulance to be operated.

(2) Have Current and valid liability insurance coverage for the air ambulance service as required by JCARs Parts 213 and 201.

(3) Have Current and valid malpractice insurance coverage for air ambulance service as per applicable regulations .

(4) Have a system and procedure for the disposal of the medical remnants.

(5) Comply with all applicable requirements of this part.

(6) The air ambulance Service must comply with the maintenance requirements, in accordance with Part M, for all Aircraft operated under the terms of its AOC

(7) The maintenance system has been approved by the CARC in accordance with Part M, Subpart G.

(8) Hold an accreditation of air ambulance services to provide assurance that the service meets national public safety standards set by Ministry of Health and from Civil Defense

(b) To maintain eligibility for an air ambulance service authorization, an air ambulance service shall meet the requirements of subsections (a)(1)-(8).

(C) **Authorization Validity:** air ambulance authorization is valid for two years issued by CARC, upon successful completion of the application process, a preliminary inspection and approval Subject to compliance with the foregoing conditions, this approval shall remain valid until the expiry date, unless surrendered, superseded, suspended or revoked.

138.15 (Reserved)

Subpart - C Medical Requirements

138.21 Applicability.

This subpart applies to Aeromedical crewmembers who are responsible for patient care on an air ambulance.

138.23 Level of Medical Care.

(a) Basic life support (BLS):

Refers to the air-medical provider offering airborne patients transport staffed by a minimum of one medical person who is experienced and qualified by training, certification, and current competency in BLS care.

This medical person practices through the orders of a physician medical director and is supported by a medically configured aircraft capable of providing BLS system (such as oxygen, suction, electrical supply, lighting, and climate control) to the person capable of recognizing respiratory and cardiac arrest, starting and maintaining the proper medical procedures, or until ALS is available. In air medical transports, BLS includes air –to-ground communications to ensure continuity of care.

(b) Advanced Cardiac & Trauma life support(ALS):

Refers to the air-medical provider offering airborne patients transport staffed by a minimum of two medical personnel who are experienced and qualified by training, certification, and current competency in emergency critical care. The medical personnel practice through the orders of a physician-medical director and are supported by a medically configured aircraft capable of providing life support system (such as oxygen, suction, electrical supply, lighting, climate control, pressurization, etc.) to the patient. The following elements are recommended for ALS course experience:

- (1) BLS.
- (2) Using adjunctive equipment and special techniques, such as endotracheal intubation and closed chest cardiac compression.
- (3) Cardiac monitoring for dysrhythmia recognition and treatment.
- (4) Defibrillation.
- (5) Establishing and maintaining an intravenous infusion lifeline.
- (6) Employing definitive therapy, including drug administration.
- (7) Stabilization of patient's condition.
- (8) ALS includes air-to-ground communications to ensure continuity of care, and the capability of constant patient has been delivered to a continuing care facility.

138.25 Medical Personnel.

A person trained in air medical environment and assigned to perform medical duties during flight including , but not limited to, doctors, nurses, paramedics, respiratory therapists or emergency medical technicians. Medical personnel may also be trained and assigned to perform other duties by the authorized air ambulance service operator.

Also the Medical Personnel assigned duty during flight shall be instructed in the use of aviation terminology.

(a) Aeromedical Director:

A licensed physician within an air ambulance service who is ultimately responsible for patient care during patient transport missions. The aeromedical director is responsible for assuring that appropriate medical personnel and equipment are provided for each patient.

(b) Basic life Support Medical Officer:

A licensed physician who is trained and hold valid BLS certificate or equivalent medical course approved by CARC.

(c) Advanced life support Medical officer:

A licensed physician who is trained and hold ALS certificate or air ambulance course or equivalent course approved by CARC.

(d) Registered Nurse:

A registered licensed Nurse who completes an air ambulance medical course or equivalent emergency course approved by CARC.

(e) Paramedic:

A registered licensed Nurse who successfully completed an Paramedic course approved by ministry of health or air ambulance course approved by CARC with advanced medical training course that includes for normal course work , practical instruction clinical & field experience and who is certified to perform those skills in the Emergency Room .

(f) Emergency Medical Technician:

A licensed Medical Technician who may perform Basic life support services or those services equivalent to level of certification.

138.27 Medical Personnel Requirements.

(a) To Serve as an Aeromedical Director a person must:

- (1) Hold valid and none limited physician license issued by ministry of health.
- (2) Hold a diploma in Aviation Medicine or equivalent.
- (3) Have at least five years work experience in Aeromedical Evacuation.
- (4) Know the Medical Standard and Regulation in Civil Aviation Regulatory Commission (JCAR) and other Authorities' Regulation like European regulations ICAO (Annex1) and Federal Aviation Administration (FAA – Part 67) .

(b) To Serve as a Basic Life Support Medical Officer a person must:

- (1) Hold valid and none limited physician license issued by the Ministry of Health.
- (2) Hold valid BLS certificate or air ambulance course or equivalent medical course approved by CARC.
- (3) Complete three years of work experience in the same field and Aeromedical Evacuation.
- (4) Hold valid Third Class Medical certificate issued under of JCAR Part Med.

(c) To Serve as an advanced life support Medical officer a person must:

- (1) Hold valid and none limited physician license issued by the Ministry of Health.
- (2) Hold valid ALS certificate or air ambulance course or equivalent course approved by CARC.
- (3) Complete three years of work experience in the same field and Aeromedical Evacuation.
- (4) Hold valid Third Class medical certificate issued under JCAR Part Med.

(d) To Serve as a Registered Nurse a person must:

- (1) Hold valid and none limited professional license issued by the Ministry of Health.
- (2) Complete five years of work experience in the same field & air ambulance course or equivalent.
- (3) Hold valid Third Class medical certificate issued under of JCAR. Part Med.

(e) To serve as a Paramedic a person must:

- (1) Hold a valid & none limited professional license issued by the Ministry of Health.
- (2) Complete Five years work experience in the same field & air ambulance course or equivalent.

(3) Hold valid Third Class medical certificate issued under of JCAR Part Med.

(f) To Serve as an Emergency Medical Technician:

(1) Hold a valid and none limited Professional license issued by the Ministry of Health.

(2) Complete three years of work experience in the same field or air ambulance course or equivalent.

(3) Hold valid Third Class medical certificate issued under of JCAR Part med.

(g) An authorized air ambulance service operator may request a deviation to employ a person who does not meet the appropriate airman experience managerial experience or supervisory experience requirements of this section if CARC finds that the person has comparable experience, and can effectively perform the functions associated with the position in accordance with the requirements of JCAR and the procedures outlined in the authorized air ambulance service operator manual.

138.29 Medical Personnel Training.

All physicians, nurses and respiratory therapists shall have extensive experience in critical care medicine. The doctors and nurses shall be certified in Advanced Cardiac Life Support, and be further trained in aviation physiology. Paragraphs (a), (b) and (c) of this section describe the minimum required training areas with respect to BLS, ALS and other required training:

(a) Basic Life Support Training:

(1) Airway maintenance and ventilatory support.

(2) Obtaining and monitoring vital signs.

(3) Cardiopulmonary resuscitation (CPR).

(4) Defibrillation with an Automated External Defibrillator (AED).

(5) Performing scene assessment, Patient assessment and triage.

(6) Bleeding control, wound care, and treatment for shock.

- (7) Fracture immobilization.
- (8) Management of medical and behavioral emergencies.
- (9) Gaining access to patients and extricate for treatment and transport.
- (10) Use of emergency medical services communication equipment.
- (11) Provide verbal patient reports and run documentation to the care facility as required.
- (12) Additional procedures and skills as recommended by CARC and approved by the Aviation Medicine Department.

(b) Advanced Life Support Training:

- (1) Administration of approved intravenous fluids.
- (2) Airway maintenance and ventilatory support including endotracheal intubation, nasotracheal intubation, cricothyroidotomy, and needle thoracostomy.
- (3) Administration of approved drugs.
- (4) Electrocardiogram monitoring and interpretation.
- (5) Defibrillation and synchronized cardio version.
- (6) Orogastic and nasogastric insertion, lavage and suction.
- (7) Additional procedures and skills as recommended by the by CARC and approved by the Aviation Medicine Department.

(c) Other Required Training:

- (1) Medical personnel shall also be trained to properly use, remove, and replace medical equipment installed on the aircraft.
- (2) Medical personnel shall be trained in physiological aspects of flight prior to being assigned duty during flight.
- (3) Medical personnel shall also be trained in aircraft evacuation and patient loading and unloading.

(4) The training program shall consider the particular aircraft being used, and its safety features. A practice evacuation using emergency exits shall be accomplished.

(5) Medical Personnel shall use aviation terminology to avoid confusion or misunderstandings of instructions from the flight crew during the Air Mission.

138.31 Medical Equipment.

Sections 138.33 and 138.35 describes the Applicable Medical equipment shall be installed in the air craft. The applicant shall identify in their initial application, any specialized equipment that may be used in the Air Medical Operation. The equipment shall be installed in the Aircraft in an acceptable method using data approved by the aircraft manufacturer or medical equipment manufacturer or by the Chief Commissioner of CARC:

(a) The Equipment must be periodically tested, inspected & certified by Approved Medical Equipment Agent.

(b) A checklist of medical equipment's shall be filled before any mission and records shall be kept for periodical check by CARC personnel .

138.33 Basic Equipment.

Prior to any medical air mission the basic medical equipment must include the following:

(a) Portable Ventilator with rechargeable Battery.

(b) Pulse oximeter.

(c) Portable Cardiac Monitor.

(d) Defibrillator with rechargeable Battery, Electro Cardio Graph (ECG), Leads, Pediatric and Adults Paddles.

(e) Suction unit.

(f) Blood pressure devise, Doppler Monitor.

(g) Installed oxygen System Source mounted in the patient Case area: Fully inspected & maintained.

- (h) Three Oxygen Cylinders bottles at least.
- (i) External Battery.
- (j) Intravenous Pump.
- (k) Different sizes of Endo Tracheal tubes.
- (l) Different sizes of laryngoscope.
- (m) All the Emergency & life saving drugs.
- (n) Any other equipment that be needed for specific Medical case that shall be approved by the Medical Director & the Medical Engineer.

138.35 Additional Medical Equipment.

The following additional items of equipment are recommended for Emergency Air Missions:

(a) Medical oxygen system:

A medical oxygen system including bottles, lines, gauges, regulators, and other system components which has been installed by approved data on an aircraft becomes an "appliance." An Oxygen bottle installed in the cabin area having its own regulator, hose, and mask feeding directory to the patient may be removed and serviced by any person trained by the authorized air ambulance service operator. If servicing is accomplished by removing and replacing bottles or by disconnecting lines, regardless of the type fitting, it must be accomplished by an appropriately certified mechanic or repairman.

(b) Motor-driven Vacuum/Air pumps:

Motors and /or pumps must be installed in accordance with applicable JCAR parts. Any motor-driven device shall be installed in a way to preclude contact with any flammable fluid, gas, or foreign materials that may cause heat buildup and possibly fire.

(c) Incubators:

Incubators, balloon pumps, or other large carry-on medical equipment must be restrained in an appropriate manner to the following ultimate load factors:

(1) 3.0 g upward, 6.6 g downward, and

(2) 9.0 g forward, 1.5 g sideward

(d) If pull test data are not provided by the equipment manufacturer to verify that specific equipment can withstand the above loads, the authorized air ambulance service operator must demonstrate the above loads on each specific piece of equipment, or use an approved restraining device. Aircraft cargo straps or safety belts provide a satisfactory restraint in many instances. Also, mechanical (metallic) fasteners may be used for attachment.

(e) The incubator lid latches shall withstand appropriate loads (approximately (6 kg) 15 pounds and any significant lid load).

The authorized air ambulance service operator shall ensure the unit has minimum movement when secured if straps or belts are used. If the incubator includes features requiring electrical power, operation shall be evaluated to assure there is no interference with the instruments and equipment that are required by the JCAR airworthiness certificate for safe operation of the aircraft. The operator shall provide padding for the infant for forward loads.

(f) Stretchers (litters):

Stretchers must be in compliance with certification specification (CS 23) with restraint devices meeting CS 23 Restraining devices, including shoulder harnesses, must be available to ensure patient safety.

(g) Any other equipment recommended or required by medical Director according to the medical case shall be in written order CARC for Approval.

138.36 – 138.40 Reserved.

Subpart- D
Aircraft Requirements and Maintenance Certification

138.41 General.

No authorized air ambulance service operator may use an aircraft in the form of air ambulance unless the aircraft is certified in accordance with the requirements of part 21.

138.43 Eligibility.

To be eligible for an air ambulance aircraft certification and operation:

- (a) The Aircraft is equipped, as required for the area and type of operation and the equipment of the Aircraft intended to be used meets the minimum requirements for the planned operation for air ambulance service as per this part.
- (b) The Aircraft shall be registered in accordance with part 47.
- (c) The aircraft shall meet the requirements of standard Certificate of Airworthiness (C of A), as prescribed in part 21 Subpart H.
- (d) The aircraft shall meet the additional special requirements as per this part
- (e) The aircraft is operated under JCAR OPS 1 and the operator hold a current Air Operating Certificate.
- (f) The Aircraft shall meet the operation requirements specified in this part.

138.45 Special Additional Requirements.

The operator of a fixed –wing under part JCAR OPS 1 who desires to operate air ambulance service is required to have additional equipment installed in the Aircraft in an acceptable manner and approved by the CARC, and shall at least:

- (a) Have an entry that allows patient loading and unloading without tilting the patient greater than (30) thirty degrees from the horizontal axis.
- (b) Having a heating system that maintains temperature of not less than 20°C in the patient compartment during patient transport in winter weather conditions or demonstrate a procedure to maintain patient temperature, to prevent hypothermia.

(c) Have air conditioning systems that shall maintain a temperature of not more than 26°C in summer to prevent hypothermia.

(d) Utilize an alternate aircraft or alternate mode of transportation, if the environment within the aircraft is such that it would be detrimental to the staff's physical welfare or the patient conditions until those conditions are alleviated.

(e) Be configured in such a way that air medical personnel shall have access to the patient in order to begin and maintain both basic and advanced life support.

(f) Have interior lighting adequate, to ensure complete observation of the patient, and without interfering with the pilots vision.

(g) Have a procedure to limit light in the cockpit during night operation.

(h) Have an electric inverter with two outlets to convert Direct Current (DC) to Alternative Current (AC) for operations of specialized equipment.

(i) Have equipment, stretcher or litter which:

(1) Has capability to raise the head of the patient

(2) Has appropriate device to secure patient to the stretcher.

(3) The upper surface of the litter must be at least 75 cm from the ceiling of the aircraft, or off the under surface of another litter.

(4) The stretcher or litter must be at least 50 cm wide and 170 cm long.

(j) Radio equipment used in Emergency Medical Service (EMS) aircraft shall be appropriately licensed, copies of the current communication licenses to be kept in the providers offices.

(1) Aircraft shall be equipped with two ways radio communication equipment capable under normal conditions, of contacting dispatch centers and hospitals.

(2) Aircraft shall have air-to-air, air-to-ground and ground-to-air communication capabilities and shall be to properly coordinate the landing and primary medical responders on the ground who may be caring for the patient, and.

(3) Aircraft shall have a minimum of two portable communication devices capable of operating on the provider frequency that shall be provided for personnel when away from the aircraft.

(4) An intercom system shall be provided for flight crew members and medical personnel to communicate with each other during the flight.

(5) Medical oxygen system, either portable or fixed, which is approved by the CARC Aviation Medicine Department, and CARC Director Flight Safety.

(6) Before returning the aircraft to service, after the installation of additional equipment, flight test must be accomplished to determine if there is radio frequency/ electromagnetic interference Radio Frequency Interference/Electro Magnetic Interference (EMI/RFI) with any navigation, communication, or flight control system, the flight test shall be accomplished in visual meteorological conditions (VMC).

(7) Each aircraft and its equipment shall be checked after each use to ensure that it is in a clean and sanitary condition.

(k) Complying with Medical requirements specified in Sub part C of this part as applicable.

138.47 Maintenance Arrangements:

- a) An authorized air ambulance service operator shall not operate an Aircraft unless it is maintained and released to service by an organization appropriately approved/accepted in accordance with Part 145.
- b) Aircraft continuing airworthiness requirements needed to comply with the air ambulance service authorization requirements are those set up in Part M.

138.49 Reserved

Subpart- E
Facilitation Requirements

138.51 Facility Requirements.

The applicant shall identify the base and location of the proposed air ambulance service. It shall include the premises of the service operator offices suitably situated, and comprises:

- (a) Versatile public communication system.
- (b) Ground ambulance as applicable.
- (c) Medical Equipment Storage.
- (d) Accommodation facilities.
 - (1) An air ambulance service must comply with requirements specified in part OPS1 and part M.
 - (2) Accommodation facility for all medical personal.

183.53 Intercommunication.

A communications system between the base operation, the air ambulance and hospitals shall be developed, coordinated and maintained by each ambulance provider, the communication system shall meet the following requirements:

- (a) Radio equipment used in emergency medical services, shall be appropriately licensed and kept in the provider's offices.
- (b) Operation base shall be equipped with two ways radio communication equipment capable under normal conditions, of contacting dispatch centers and hospitals.
- (c) Operation base shall have air-to-air, air-to-ground and ground-to-air communication capabilities and shall be to properly coordinate the landing and primary medical responders on the ground who may be caring for the patient, and.
- (d) The authorized air ambulance service operator shall provide a minimum of two portable communication devices capable of operating on the provider frequency for personnel when away from the aircraft.

138.55 Aircraft spacing.

All authorized air ambulance service operator shall have available hanger spacing for:

- (a) Housing the aircraft when not in use.
- (b) Keeping the maintenance recording requirement, and
- (c) All records regarding operational aspects of the aircraft including but not limited to:
 - (1) Crewmembers flight time and rest records, and
 - (2) Records of the proficiency and training records.

138.57-138-60 Reserved.

Subpart-F
Operations Requirements and Agreements

138.61 Operations Requirements.

The authorized air ambulance service operator shall have CARC AOC approval with current and valid operation specifications authorizing air ambulance operations for fixed wing air ambulance, along with the additional requirements in the operators operations specifications:

1. Fixed-wing Air Ambulance Operations Requirements:

Fixed wing aircraft operated by authorized air ambulance service operator shall be at the mobile intensive care level. Persons or entities operating fixed wing air ambulances must direct and control the integrated activities of both the medical and aviation components. Although the aircraft operator is directly responsible to the Civil Aviation Regulatory Commission (CARC) for the operation of the aircraft, typically the one in charge of the medical functions, directs the combined efforts of the aviation and medical components during patient transport operations.

When being used as an air ambulance, a fixed wing aircraft shall:

- a) Be multi-engine or be a single, turbo-prop engine capable of maintaining cabin pressurization;
- b) Maintain a cabin altitude consistent with patient diagnosis, condition, and destination;
- c) Be equipped and kept current for instrument flight rules (IFR) flight;
- d) Be designed or modified to accommodate at least one stretcher patient with the manufacturer's recommended and approved by CARC.
- e) Have a lighting system which can provide adequate intensity to illuminate the patient care area and an adequate method (curtain, distance) to limit the cabin light from entering the cockpit and impeding cockpit crew vision during night operations;
- f) Have a permanently installed climate control equipment to provide an environment appropriate for the medical needs of the patient(s). [have an environmental system (heating and cooling) capable of maintaining a comfortable temperature at all times];
- g) Have an interior cabin configuration large enough to accommodate the number of air medical personnel needed to provide care to the patient, as well as an adult stretcher in the cabin area with access to the patient. The configuration shall not impede the normal or emergency evacuation routes;

- h) Have an electrical system capable of servicing the power needs of electrically powered on-board patient care equipment;
- i) Have all installed and carry-on equipment secured using CARC -approved devices and methods;
- j) Specialized medical equipment, as specified by this part.
- k) Have sufficient space in the cabin area where the patient stretcher is installed so that equipment can be stored and secured with CARC - approved devices in such a manner that it is accessible to the air medical personnel; and
- l) Have at least two CARC approved fire extinguishers approved for aircraft use. Each shall be fully charged with valid inspection certification and capable of extinguishing type A, B, or C fires. One extinguisher shall be accessible to the cockpit crew and one shall be in the cabin area accessible to the medical crew member.

2. An Authorized Air ambulance service operator shall have a written plan to assure all requests for services on daily basis are promptly answered. The written plan shall include at least but not limited to the following items:

- a) Provide two-way communications with pilots.
- b) Provide pilots with weather briefings, to include current and forecast weather along a planned route of flight.
- c) Monitor progress of each air ambulance flight.
- d) Ensure pilots have completed all of the required items along a planned route of flight on a preflight risk analysis if applicable.
- e) Acknowledge, in writing, specifying date and time, that a preflight risk analysis if needed have been accurately completed and that, according to their professional judgment, a flight can be conducted safely .

3. Request for emergency service shall be dispatched within (5) minutes of the call taker determining the correct address location of the emergency incident site and completion of a weather check.

4 . Any Authorized air ambulance service operator determines that it is unable to have an aircraft responding within (15) minutes from the initial time and emergency call received from the dispatch center shall notify the requesting agency of the inability to respond within (15) minutes time frame and advice the caller of the time frame in which the aircraft would be available to respond. The requesting agency shall resume responsibility for making the decision to wait for the aircraft or to contact another air ambulance authorized Operator .

5. The Authorized air ambulance service operator shall comply with JCARs requirements for flight following and position plotting by a OCC and shall be equipped with communication equipment and staffed by a properly trained Air Medical Communication Staff (ACS) to receive and coordinate all calls as provided for by JCARs, if providing fixed-wing service this requirement may be met by filling and ATC flight plan. The operator shall also consider employing satellite/GPS tracking for flight following tasks as a substitute for voice radio connectivity.

6. The Authorized air ambulance service operator shall comply with JCAR Ops 1 and part M requirements.

8. The Authorized air ambulance service operator shall manage and dispose the medical remnants as required by Ministry of Health Regulations .

9. The Authorized air ambulance service operator shall use a replacement aircraft on a temporary basis if an approved aircraft is out of service, the temporary replacement aircraft must meet the requirements of this part and the pertinent JCARs. In this case the Operator must notify CARC in writing at least 24 hours before.

10. The Authorized air ambulance service operator shall comply with JCAR Ops 1 operation of aircraft and:

- a) Not transport more patients, personnel, and other persons that cannot be safely secured by means of seatbelts or similar devices in the aircraft during flight .
- b) Passenger-carrying operations: passenger briefing cards are required in air ambulance operations. Operators are required to document procedures for the proper restraint of all flight personnel, patients and passengers and the proper use of seatbelts and shoulder harnesses during air ambulance operations. In addition, it is the responsibility of the PIC to insure passengers (such as hysterical or combative patients) who may pose a hazard to the aircraft or occupants are properly restrained before takeoff. Procedures detailing the proper restraint of patients/passengers shall be detailed and documented, taking into account local law and applicable regulations.
- c) Have fixed-wing aircraft pressurized if flight is more than 10,000 ft.
- d) Medical equipment shall be functional without interfering with the avionics nor shall avionics interfere with the function of the medical equipment.

138.63 Agreements Requirements.

An authorized air ambulance service operator entering mutual agreement with other authorized air ambulance the agreement shall address:

- (a) The type of mutual aid assistance to be provided.
- (b) Response, personnel, including levels of training or education and provisions for joint service training or education if appropriate. Regardless of the size and complexity of the operation, the operator is responsible for maintaining operational control, accomplishing flight locating and supporting the pilot during preflight planning, risk analysis, and en route by providing information and constructive input which would aid the pilot in effective decision making.
- (c) Response aircraft including unit identifier and station or location from which the aircraft shall operate. Radar and communications coverage, including minimum altitudes for radar service and communications with air traffic facilities and company communications facilities.
- (d) A plan of action for the mutual aid agreement including dispatch and notification procedures. The plan of action shall include the Action Plan Checklist for Fixed wing Aircraft with at least the following information Details of the Mission:
 - 1) Pilot / Crew Requirements
 - 2) Weather Information
 - i. Departure
 - ii. Enroute
 - iii. Destination
 - iv. Significant weather, fog, turbulence, cloud base.... etc
 - v. Weather forecasts METAR's TAF's.... etc
 - 3) Role Equipment Serviceability
 - 4) Flight Plan with Alternative (VFR /IFR)
 - 5) Fuel Required with Reserve Fuel
 - 6) Area Charts :(Topographical, Aeronautical)
 - 7) Communication / Navaid Information: (Police/Fire/Ambulance, ...etc)
 - 8) Mission Equipment
 - i. Long range fuel tank (if applicable)
 - ii. Medical equipment
 - iii. Special equipment / personnel
 - 9) Patient/ Medical details
 - i. Pressurized
 - ii. Non-pressurized
 - iii. Height limitations

iv. Medical equipment require

(e) Radio and other communication procedures between the air ambulance operator and with whom the operator has mutual aid agreements. Including but not limited to receiving flight requests for air ambulance operations, communications with medical, first response and other medical organizations, communications with air ambulance crews and flight locating. Communication is critical to successful operations and maintaining orderly separation and coordination between air ambulance, ground units and communication centers.

(g) On-scene coordination and scene control including medical direction if several agencies respond to same incident.

(g) Exchange of patient information, responds and reports as allowed by National law.

(h) The effective dates and process of amendment or termination, and

(i) Air ambulance Operator frequency for personnel when away from the aircraft. In addition to the radios required for ATC and communication with the Operations Control Center (OCC), a radio capable of air-to-ground communications is required to ensure coordination with ground personnel (e.g., hospitals, personnel on the scene, police or fire department).

138.65 –138.70 Reserved.

Subpart-G Training

138.71 General.

This subpart outlines training requirements for all personnel which include flight crewmembers, maintenance and medical personnel.

138.73 Flight Crewmembers.

Because of circumstances in work is accomplished, aircraft may be frequently assigned to fly in less than ideal weather conditions; i.e., night, low ceiling and/ or low visibility, and into remote areas. The pilots of a fixed wing air ambulance must have special requirements in addition to the requirement of JCARs FCL1, and the operator approved Operation manual, regarding the selection and experience of the flight crew members.

Selection: The Operations Manual shall contain specific criteria for the selection of flight crew members for the air ambulance operations, taking previous experience into account.

Experience: The minimum experience level for flight crew conducting fixed wing air ambulance flights shall not be less than:

(a) Fixed-wing aircraft pilots: Multi-Engine or Single Engine.

The fixed –wing pilot in Command shall possess airline transport pilot license (ATPL) with a minimum of 1500 and:

- (1) Be trained and qualified in Accordance with this part and air ambulance operations specifications.
- (2) Have 500 hours as PIC in fixed-wing aircraft type prior to performing air ambulance missions.
- (3) Type rated on aircraft: 100 hours on type (or on an aircraft of similar performance capability). The above may include previous experience on either Civilian or Military Airplane, providing that the flight crew shall conduct full initial type rating on an approved training organizations if they are not type rated.
- (4) For Co-pilot: Multi-Engine or Single Engine:

- i. Possess Commercial pilot's license (CPL/IR) with ATPL Theoretical Knowledge.
- ii. Total Flight Experience: 1000 hours flight time with 500 As PICUS .
- iii. Night Experience: 100 hours with night endorsement.

(5) Recency. All pilots conducting shall have completed a minimum of 30 minutes flight by sole reference to instruments in a or in a synthetic training device (STD) within the last 6 months. Refer to OPS 1.965 Recurrent training and checking and OPS 1.970 Recent experience.

(b) All pilots shall undergo regular recurrent training to ensure they will be familiar with all instrument flight procedures authorized on the operator's operations specifications. In addition, be proficient in non- precision approach procedures.

(c) A training program shall be prepared that will address the possibility of a forced landing in a remote area and procedures relevant to the evacuation of patient in extreme conditions related to forced or precautionary landing.

(d) Training shall also address procedures to be followed in the event of a fire or smoke in the cabin while either airborne or on the ground and meet the needs of the patient during and after evacuation.

(e) Crew Resource Management (CRM) and MCC basic courses, and then recurrent courses.

(f) Dangerous Goods Course.

138.75 Medical Personnel.

Medical personal shall comply with Subpart – C of this part.

138.77 Ground Crew and Other Ground Personnel.

Operation call for special training requirements, i.e., ground crew and personnel other than crewmembers, shall address at least the following:

(a) Air Medical Communication Staff, shall have documented training appropriate to their type of operations that shall as a minimum addresses the following as applicable:

- (1) JCARs pertinent to air Ambulance operations.

- (2) Air Medical Radio Communications.
 - (3) Medical Terminology.
 - (4) Flight utilization and coordination.
 - (5) Navigation and weather interpretation.
 - (6) Flight following, and
 - (7) Emergency procedures.
- (b) Loading and unloading of aircraft.
- (c) Positioning and parking the aircraft, and directing ambulance & ground equipment.
- (d) Coordination with local authorities (fire brigade, immigration...etc).
- (e) Coordination between maintenance crew and medical crew regarding the correct procedures to follow when using fixed oxygen equipment.
- (f) Supplemental training program on servicing and maintenance of on board medical equipment.
- (g) Organization Operation Manual as applicable.

138.79 Aircraft Evacuation.

The Training program shall consider a Practical Evacuation Exercise for all personnel using emergency exits.

138. 81 Maintenance Personnel.

- (a) Maintenance personnel shall receive all the training required under Part M and Part 145 as applicable.
- (b) Maintenance personnel shall perform their inspection before the loading or after the unloading of the patient.
- (c) Although the aircraft may appear clean and sanitary, the maintenance personnel shall be aware that there may be contaminants aboard. The maintenance personnel shall exercise good judgment and use caution to prevent the possibility of contracting and infectious disease.