



**Subject: SAF 004 Ambulance Safety**

**Purpose:** To establish safety guidelines for ground operations

**Policy:** All Jet Rescue Staff must comply with these safety guidelines.

**Application:** All Jet Rescue Medical and Flight crew members.

**Procedure:**

1. All vehicles are to be operated in accordance with Local, Federal, State, and Hospitals Regulations. Some of the many issues addressed by these regulations include:
    - No Smoking
    - Patients restrained by stretcher straps
    - Stretcher and isolettes to be secured by the approved restraint system
    - Use of both lights and siren together when driving emergency traffic
    - Appropriate rest
  2. The ground operator is the authority for safety and operational issues. This includes; but is not limited to issues such as inclement weather, mechanical, equipment loading, and safe operation of the vehicle. The Medical Team is the authority for patient care issues.
  3. All equipment, medical items, and personal must be secured.
  4. Seat Belts: The Medical team and any passenger(s) will wear seat belts. When leaving the seat for patient care, the Medical Team will notify the driver they are out of their seat belt. Passengers must remain belted at all times.
  5. On non-patient legs of transport, a Medical Team member is to ride in the front of the vehicle. He/she is to function as an adjunct safety officer, providing a second set of eyes and an aid to navigation.
  6. The hydraulic lift is to be used on every mission done in units equipped with a lift.
  7. Compressed Gases: It is the duty of the Medical Team to determine if they have sufficient compressed air and oxygen for a given transport. Prior to departure for any transport the compressed gas tanks should have a minimum:
    - 700 psi M, G, H Tanks
    - 1000 psi D, E Tanks
- All compressed gases will be turned off prior to disembarking.
8. Fuel: All units are to be left fueled following each transport. Fuel is filled to full. Charge card/petty cash is to be carried to purchase fuel for a given transport. The ambulance is not to be fueled with a patient on board.



9. Any safety concerns should be debriefed following a mission. Safety incidents must be reported per policy.
10. If involved in an accident follow Jet Rescue Emergency Action Plan.
11. Ground operators: The backup camera on Unit 8, which is voice-enabled, is to be used anytime the ambulance is operated in a rearward direction. A spotter will be used when it is practical to do so.
12. All personnel is required to be familiar with all exits, fire extinguishers, and any other safety equipment mounted inside or outside the vehicle.



**Subject: Gen 035 Oxygen Administration and Storage.**

**Purpose:**

1. To Assure that there is enough oxygen in every flight.
2. To assure that every patient receives oxygen during transport

**Policy:** Oxygen will be administered and stored as outlined below.

**Application:** All Jet Rescue Bases and Vehicles

**Procedure:**

1. The main supply of oxygen will be stored in either one (1) or two (2) “M” tanks installed in Aircraft Galley or Lifeport Stretcher system.
2. Minimum oxygen on the aircraft will be a total of 1000 lbs. psi on each “M” tank. The flight crew will be responsible for checking oxygen levels every shift and before every flight.
3. “M” tanks will be filled while remaining on aircraft with O<sub>2</sub> from the “G” cylinder by a mechanic.
4. The “G” cylinder will be stored in a locked storage area. The used tank will be picked up and refilled by Infra Servicios de Oxigeno according to need.
5. Portable oxygen will be stored only in aluminum “E” cylinders.
  - 5.1 Minimum oxygen in the “E” cylinder will not be less than 500 pounds psi.
  - 5.2 Only round dial type oxygen regulators will be utilized with an oxygen key either kept on the tank or in the crew’s pockets.
  - 5.3 Oxygen tanks will be stored in a storage rack in the locked storage area.
  - 5.4 Used tanks will be picked up and refilled by Infra Servicios de Oxigeno according to need. The flight crew is responsible for checking availability every shift and arranging for pick-up as needed.
6. Procedure for patient use of oxygen
  - 6.1 User Level Testing: Before each use, paramedics perform the following checks to ensure the equipment is functioning correctly.
    - A. Leak Test: Open the cylinder valve with a wrench, then immediately turn it back off. Observe the pressure gauge needle for 10 minutes; if it drops, there is a leak. Leak Testing before use, ensure the regulator is secure. Open the cylinder valve (turn counter-clockwise) and listen for hissing, which indicates a leak.
    - B. Pressure Check: The regulator gauge is checked to ensure it is not in the red zone; a fully charged tank typically shows high pressure (e.g., 2000-2200 psi). Replace or refill the tank when the needle hits the red zone or drops below 200 PSI.



C. Flow Test: Ensure the flow regulator is working by placing the tip of the nasal cannula near your face.

D. Visual Inspection: Check for rust, dents, or grease. Never use oil or grease on oxygen equipment, as it can cause a fire or explosion.

E. Refill Requirements: If a cylinder is in use and reaches its retest date, it does not need to be removed from service immediately; it can be used until empty and then sent for testing.

6.2 All patients, unless contraindicated, will be oxygenated in flight according to need.

Titrate to obtain a SaO<sub>2</sub> >95%

6.3 The use of PEEP requires consultation from Medical Director if No Doctor on Board.



## **Subject: Gen 037 Aircraft Switch-out Procedure**

### **Purpose:**

To assure all necessary equipment is exchanged to maintain the aircraft in mission-ready status.  
To describe the changeover standard operating procedure to convert charter aircraft into air ambulance.

### **Policy:**

- 2.1 When a need for back – up aircraft arises, the Base Manager will determine which aircraft will be coming and inform the flight crew.
- 2.2 All additional equipment needed will be procured and readied by the on-duty flight crew.

**Application:** All Jet Rescue Bases and Vehicles

**Procedure:** The following activities will be performed:

- 3.1 The flight nurse or Paramedic will check all equipment prior to loading for operation and cleanliness.
- 3.2 Check stretcher oxygen source and regulator. Ask Maintenance to Refill the tank if the psi is less than 1000 lbs. or for a prolonged trip make sure there is enough oxygen to meet patient requirements as well as contingencies, see oxygen policy/procedure
- 3.3 The aircraft mechanic will remove aircraft seats in the cabin as necessary.
- 3.4 Four clamps will be placed in the seat tracks in the appropriately marked spaces.
- 3.5 The Egan or Life Port stretcher will be loaded into the aircraft LEGS first and secured to the clamps.
- 3.6 Transfer all aircraft equipment from the one in service to the backup or load a complete Set of equipment from the storage room.

Onload the following equipment:

- a. Oxygen
  - b. Adequate "E" cylinders in the cage
  - c. Regulators
  - d. Oxygen Keys Suction
  - e. Canister
  - f. Regulator with appropriate wall connector
  - g. Portable suction availability (two may be needed if a/c does not have wall suction)
- 3.7 Verify Narcotic Security
    - a. Locked drawer with keys
    - b. Carry narcotics on a person if a locking drawer is not available
  - 3.8 Pilots are responsible for transferring all equipment, manuals, and supplies Located in the cockpit area.



- 3.9 Verify take off/landing checklist in place
- 3.10 Verify the same equipment leaves with a/c as when it arrived.
  - a. Stretcher
  - b. Headsets
  - c. Keys
- 3.11 Clean back-up a/c prior to its leaving.
- 3.12 Upon receiving a/c, notify the pilot of needed or desired repairs to be passed on to the Mechanic.
- 3.13 After all equipment is moved from one a/c to another, both crewmembers must make one final check through all drawers and storage compartments.
- 3.14 The aircraft switch checklist is to be completed and signed by both crew members
- 3.15 After completing the mission, offload the equipment and have maintenance remove the Egan or Life Port stretcher in reverse order.
- 3.16 Clean the stretcher and mattress with a diluted solution of sodium hypochlorite [bleach] and double bag all contaminated/used linens.
- 3.17 All battery-operated equipment will be recharged per equipment policies.
- 3.18 Flight bags will be restocked.
- 3.19 Make certain that all equipment has been removed from the aircraft with special attention to stretcher clamps (nuts, bolts, and washers).

### **Subject: Gen 038 Personal Protective Equipment**

**Purpose:** To establish guidelines for the use of Personal Protective Equipment by Jet Rescue personnel.

#### **Policy:**

- 1.1 The Jet Rescue Crew will adhere to OSHA / STPS and body Substance Isolation guidelines for prevention of contamination of self during the care and transport of patients.
- 1.2 Jet Rescue personnel will follow the Body Substance Isolation Exposure Control Plan.

**Application:** All Jet Rescue Bases and Vehicles

#### **Procedure:**

- 3.1 PPE (includes gowns, gloves, masks, eye protection, face shields, shoe covers, etc.) is readily available on the aircraft for employee use.
- 3.2 BSI(Body Substance Isolation) is used on all patients at all times when handling blood, body fluids, mucous membranes or any moist body surface.
- 3.3 Any invasive treatment such as IV initiation, intubation, etc., will require crew members to wear PPE as outlined below.



# MEDICAL POLICIES AND PROCEDURES MANUAL

“Medical Gases Policy”  
PART 7



**Jet Rescue Air Ambulance's Medical Policies and Procedures Manual is updated as needed and reviewed annually. The last complete review was on April 3, 2024.**

**Signature:** \_\_\_\_\_  
[Redacted Signature]  
\_\_\_\_\_  
Director of Medical Services

**Date:** 04/03/2024

**Signature:** \_\_\_\_\_  
[Redacted Signature]  
\_\_\_\_\_  
Senior Medical Advisor

**Date:** 04/03/2024

**Signature:** \_\_\_\_\_  
[Redacted Signature]  
\_\_\_\_\_  
Chief Flight Coordinator

**Date:** 04/03/2024

**Signature:** \_\_\_\_\_  
[Redacted Signature]  
\_\_\_\_\_  
President and CEO

**Date:** 04/03/2024



# MEDICAL GASES POLICY

## OXYGEN USE SAFETY

All oxygen tanks are stored in safety racks located in the hangar. Large M tanks are to be moved to and from the aircraft using the safety cargo carts. E tanks are equipped with an attached "walk bout" handle for easy carry.

Gas tanks are never to be dropped or knocked over while handling. M tanks will be stored on the aircraft and secured on its holder under the stretcher.

All regulators are to be in easy viewing of the crew and tank levels should be monitored throughout the flight. Regulators are all positioned within easy access of the crew.

If an emergency arises such as fire, all gas tanks should be shut off by the main valve.

## PORTABLE OXYGEN TANKS EXCHANGE.

Purpose:

To explain the proper procedure for exchanging a portable O<sub>2</sub>-cylinder oxygen tank while on the road. Portable O<sub>2</sub> tanks are never to be refilled by unlicensed, line persons, but must be exchanged by an Air - gas distributor only.

Policy:

Portable oxygen tanks of Jet Rescue Air Ambulance are used for transporting patients, who are away from aircraft, and have a requirement for oxygen administration. The portable O<sub>2</sub> tanks should only be used when other forms of oxygen administration are not available.

Oxygen cylinders store oxygen under pressure, may be portable, which enables patients requiring supplemental oxygen to continue oxygen therapy away from home or hospital facility.

Aluminum Oxygen Cylinders are 35 to 45% lighter than equivalently - sized steel cylinder.

If the portable O<sub>2</sub> tanks have been used or is employed and is in need for exchange, only of the following procedures should be followed.

1. Exchange the tank either at the office or at one of the bases in HI if possible.

2. Contact Jet Rescue Air Ambulance dispatch and ask them to assist you in settings up an exchange.
3. When unable to return to base contact JR AA dispatch for help.
4. In the U.S. call -866 924-7427 (National Airgas Hotline), and ask for the nearest Airgas store to you, get their number, call them and arrange for an exchange.
5. Contact the Medical operation manager for assistance.
6. Oxygen tanks may be handled with care and stored on a safe designed area.
7. Reject damaged portable oxygen tanks.

## ONBOARD M TANK O2 SUPPLY

Per Regulations, there must be sufficient sources of oxygen onboard all aircraft, there must be oxygen sufficient for the duration of the flight, as well as oxygen administration equipment. A full M Tank and E Tanks will fulfill this requirement.

One or Two full M Tanks are to be onboard the aircraft at the beginning of every flight. The medical crew is responsible for assuring that the tank is full as part of his/her preflight check. Any tank that is empty (or  $\leq 600$ PSI) is to be replaced with a full tank prior to the departure of the flight.

It is the responsibility of the medical crew to assure that the main valve is opened prior to the patient being boarded and is closed when the patient is deplaned at the final destination.

The M tank is to be replaced, as needed, upon arrival of the aircraft back at the base.

Calculation of oxygen use in flight can be estimated by the following formula:

$$\frac{\text{PSI in tank} \times 0.28}{\text{Liter/min}} = \text{min of available oxygen.}$$

## MEDICAL COMPRESSED GAS

Storage of all oxygen and other compressed medical gas tanks in any transport vehicle will be secured and stowed at all times without impeding crew accessibility.



## MEDICAL OXYGEN

### Full O2 Cylinders/Regulators/O2 Hoses

- Located on the hangar designated area.
- O2 Cylinders are checked for adequate PAR levels bi-weekly and ordered as needed.
- Regulators and O Hoses are checked on monthly basis for the need of repairs and maintenance by the Medical Operations Manager.

### Empty O2 Cylinders

Located on the hangar, next to the exit door O2 storage area.

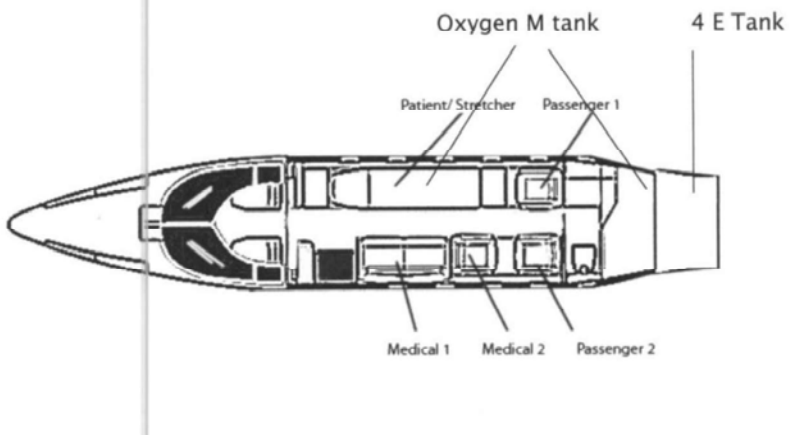
O2 is picked up and delivered bi-weekly and maintained by Medical Operations Manager.

### OXYGEN Locations aboard aircraft

- M Tanks are located underneath the stretcher base and secured
- M Tanks are to be changed at 800 psi
- E Tanks and additional Tanks are stowed in luggage compartment behind rear seat as illustrated in Stowage Lear 35 Rear Luggage

#### COMPARTMENT DIAGRAM

artment diagram.



## OXYGEN TANKS IN MÉXICO AND NORTH AMERICA.



| Older Name               |             | A           |             | B           |             | C           | D           | JD          | E                      |              |              | H            |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------|--------------|--------------|--------------|
| Newer Name               | M-2         | M-4         | ML-6        | M-6         | M-7         | M-9         | M-15        | M-22        | M-24                   | M-60         | M/MM/M122    | M250         |
| Diameter (in.)           | 2.5         | 3.2         | 4.3         | 3.2         | 4.3         | 4.3         | 4.3         | 5.3         | 4.3                    | 7.3          | 8            | 9            |
| Height (in.)             | 5.3         | 8.5         | 7.6         | 11.5        | 9.1         | 11          | 16.5        | 16.5        | 25.5                   | 23           | 36           | 52           |
| Empty Weight (lb)        | 0.7         | 1.6         | 2.8         | 2.2         | 3.3         | 3.7         | 5.3         | 8           | 7.9                    | 22.3         | 39.5         | 114          |
| Capacity (L) at 2,200psi | 42          | 113         | 165         | 164         | 198         | 255         | 425         | 640         | 680                    | 1738         | 3455         | 7080         |
| Transport Method         | Carrier Bag | Carrier Bag | Carrier Bag | Carrier Bag | Carrier Bag | Carrier Bag | Carrier Bag | Carrier Bag | Wheelchair Bag or Cart | Not Portable | Not Portable | Not Portable |
| Regulator Type           | CGA 870     | CGA 870     | CGA 870     | CGA 870     | CGA 870     | CGA 870     | CGA 870     | CGA 870     | CGA 870                | CGA 540      | CGA 540      | CGA 540      |

## OXYGEN CONNECTIONS.

- Jet-Rescue use Ohmeda type connectors and adapters.
- For portable oxygen tanks standard oxygen flowmeter with adapter is part of flight set.
- Always check prior any flight connectors and hoses are complete and in good shape!
- A different type of connections may be found in hospitals and ambulance services.



**Medical  
Ohmeda MALE  
connector**



**Ohmeda Oxygen  
Wall connection**

# Ohmeda Oxygen COUPLER



# Ohmeda Oxygen FLOWMETER



Portable  
oxygen tank  
regulator.



Flowmeter

Christmas Tree  
adapter for  
Oxygen tanks.

