



# SOUTH LYON FIRE DEPARTMENT

## Manual of Procedures 423

### AIR AMBULANCE OPERATIONS

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#### I. SCOPE

This procedure will discuss when the use of air medical transport is appropriate, as well as landing zone setup, safety, and Helicopter Emergency Medical Services (HEMS) best practices. SLFD shall follow Oakland County Medical Control Authority (OCMCA) protocol 6-4.

#### II. ACTIVATION

- A. BLS personnel may activate or place on standby an aircraft based solely on the initial radio report from dispatch.
- B. Personnel are encouraged to activate aircraft at the earliest thought that the patient may benefit from HEMS transport.
- C. Should personnel determine that HEMS is unnecessary upon arrival at the patient, notify dispatch as early as possible to cancel the requested aircraft.
- D. ALS personnel arriving on scene have the ability to cancel an aircraft requested by BLS.

#### III. LANDING ZONE REQUIREMENTS

- A. Landing zone (LZ) will consist of a level, solid 100 foot x 100 foot area, clear of debris and overhead obstacles, to be marked at each corner with a cone.
- B. Additionally, LZ selection should take into account the aircraft desired ascent and descent ratio of 6 to 1 for clearing obstacles. For example a 25 foot tall light pole should be no less than 150 feet away from the LZ in order for the aircraft to make a safe landing and departure.
- C. Any potential obstacles (trees, light poles, street signs, power lines, etc...) should be relayed to the pilot during the LZ briefing.
- D. If the landing zone is off of the roadway or parking lot, any area should be walked by LZ personnel prior to aircraft arrival to ensure that the landing surface is solid, and there is no obstruction protruding from the ground that may puncture the aircraft belly. If possible, use of R71 or similar vehicle to ensure stability of the ground is recommended. The aircraft weighs approximately 10,000 lbs.
- E. It is ultimately the responsibility of the pilot and flight crew to approve the LZ, should they deem it unsafe they may request another LZ, or divert to a different site that they feel more appropriate for landing.

#### IV. LANDING ZONE OPERATIONS

- A. When the need for HEMS is determined, dispatch will be notified via radio to either activate, or put on standby the nearest air ambulance in accordance with OCMCA protocols. It is then the responsibility of the dispatcher to contact the HEMS company directly. This may also be accomplished through HVA.
- B. Dispatch will be informed that an engine is being tasked with setting up a landing zone, and to relay to the Air Ambulance service that they can reach LZ personnel on the Michigan Public Safety Communications System (MPSCS) **AIRLZ1**.

The LZ Coordinator can communicate on AIRLZ1 via **one** of the following methods:



# SOUTH LYON FIRE DEPARTMENT

## Manual of Procedures 423

1. Use the Green Oak Twp FD MPSCS radio. AIRLZ1 is in the "C" zone.
  2. Contact MABAS Dispatch on "MABAS\_D" (talk group 5 on the SLFD, OakWin "Home" profile). Request that MABAS Dispatch patch LYF\_FD2 to MPSCS AIRLZ1. The LZ Coordinator can use LYF\_FD2 to communicate on AIRLZ1. The LZ Coordinator should use a mobile radio in an apparatus and not a portable.
- C. The CO of the engine tasked with setting up the LZ will be the LZ coordinator, and shall remain in the engine to monitor for any contact with the aircraft responding. They will also be tasked with giving the LZ briefing to the pilot. This should always be done on a mobile radio in the truck, never on a handheld radio.
- D. Landing zone briefing
- i. Brief LZ overview, including location of LZ in relation to incident scene, and type of landing surface.
  - ii. Any obstacles or hazards to landing, especially important during night time operations, and also when involving power lines, as these are extremely difficult to see from the air. It is imperative that you give specifics as to location of the obstacles, and that the locations are correct, for example telling a flight crew, that power lines are on the north side of an LZ when in fact they are on the south, could prove to be a fatal error.
  - iii. Wind direction if known.
  - iv. Best approach path for the pilot.
- E. Key Points for LZ Safety
- i. LZ coordinator will appoint a rotor guard to stand 30 feet behind the tail rotor and ensure no one approaches the aircraft from the rear.
  - ii. The engine responding will pull and charge a pre-connect and be prepared to extinguish any fire should an incident occur during HEMS operations.
  - iii. Only the LZ coordinator shall make any radio contact with the aircraft during HEMS operations. Should the crew require a patient report, the LZ coordinator will relay pertinent patient information to the crew.
  - iv. Loading and unloading of patients will be done by the flight crew, or at the direction of the flight crew only.
  - v. It is advisable to crouch when working in the vicinity of rotor blades.
  - vi. **NEVER approach the aircraft while it is running, until contact is made with the pilot, and he/she signals you that it is ok to approach the aircraft.**



# SOUTH LYON FIRE DEPARTMENT

Manual of Procedures 423



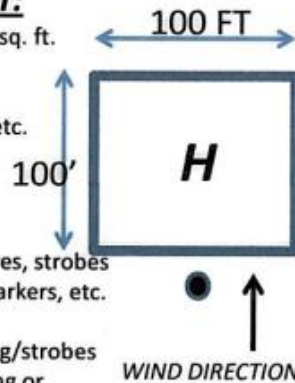
### ALWAYS ADVISE PILOT:

1. Size of LZ if less than 10,000 sq. ft.
2. Wind direction and speed
3. Any slope present in the LZ
4. Wires/Poles/Towers/Trees/ etc.
5. Any other potential hazards

### NIGHT OPERATIONS

1. LZ Boundary marked (i.e. flares, strobes, vehicle lighting, reflective markers, etc.)
2. Light-up any Hazards, if able.
3. Minimize bright white lighting/strobes when the helicopter is landing or departing a scene.

### Landing Zone Info

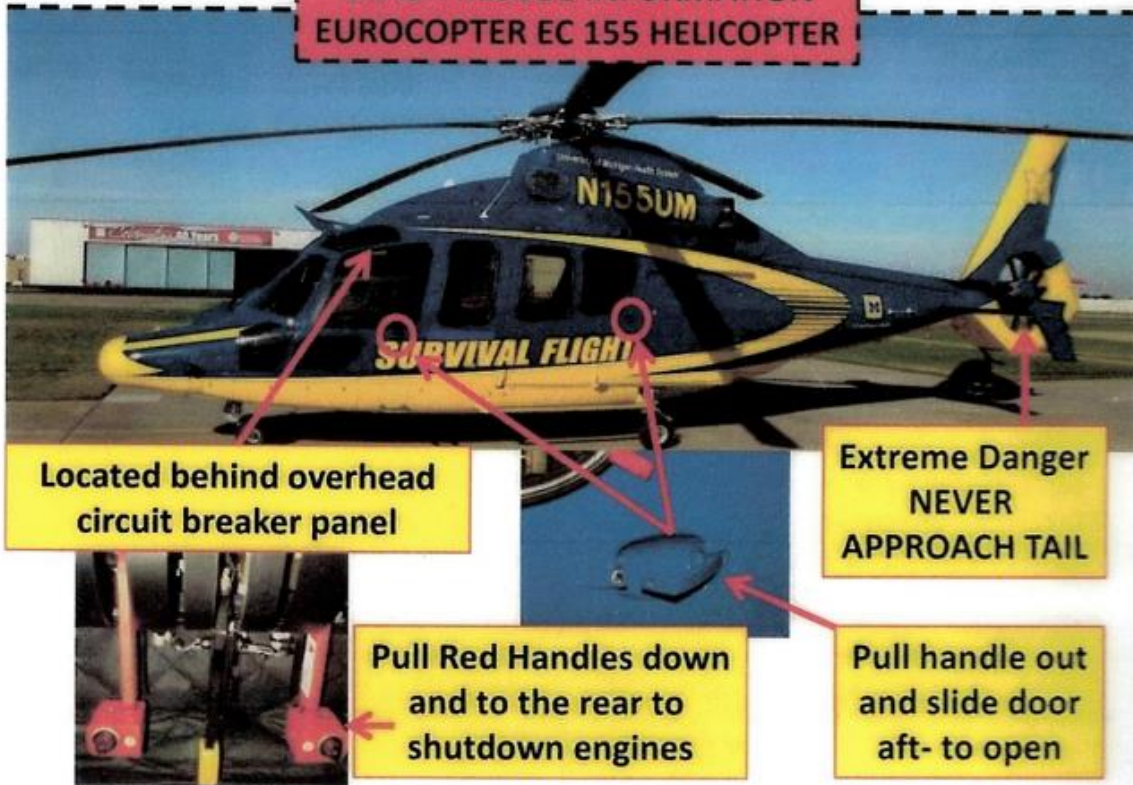


### SAFETY TIPS:

1. Clear the LZ of Debris
2. Wear protective eyewear.
3. Keep spectators back 200 ft.
4. Do not drive vehicles within 50 ft. of the rotor blades.
5. Only approach helicopter with flight crew "OK"
6. Do not use "Scene Tape." It can blow into the rotor blades
7. Don't rush- Think first

**DO NOT BE AFRAID TO ASK ANY QUESTIONS**

### CRASH RESCUE INFORMATION EUROCOPTER EC 155 HELICOPTER





# SOUTH LYON FIRE DEPARTMENT

Manual of Procedures 423

SURVIVAL FLIGHT  
 MICHIGAN 1-800-822-2233 MICHIGAN  
CRASH RESCUE INFORMATION

The diagram shows a side profile of a Eurocopter EC155B1 helicopter. Key components and their locations are labeled:

- Front (Left):** "D" Tank, Liquid Oxygen Canister.
- Main Cabin (Green):** Crew, PATIENT, MED, Crew, Crew, Crew.
- Front (Right):** Crew, Pilot, Fire Extinguisher.
- Rear (Right):** Egress Path, Aircraft Battery, CAUTION: RADAR HAZARD.
- Interior:** Fire Extinguishers, "D" Tanks.

Blue dashed arrows indicate two "Egress Path" directions: one from the rear and one from the front.

**Eurocopter EC155B1 Twin-Turbine Helicopter Specs**

GROSS WEIGHT: 10,846LBS. LENGTH: 47ft. WIDTH: 7ft. ROTOR DIAMETER: 42ft.  
 Powered by: (2) Arriel 2C2 Turbine Engines  
 MAIN FUEL TANK: 6 self-sealing bladders located in the floor of the aircraft.  
 Beginning below the Pilot Seat running to the area below the Liquid O2.  
 332 gallons of fuel total = 2189lbs of Jet Fuel.  
 Standard Mission: 220gals=1500lbs (JetA) + Crew = (1PILOT and 2 FLIGHT NURSES)

**Hazmat Issues:**

(2) 'E' Tank Oxygen Cylinder-in Main Cabin Compartment, (1) in Aft Compartment  
 (1) Liquid Oxygen Canister (8.0Liters)- in Aft Baggage Compartment.  
 Hydraulic Fluid/ Engine Oil/ Transmission Oil/ 24volt Battery. Parts of Main Rotor Transmission are made from Magnesium Material.

**JET FUEL:**

- Jet A (with Prist additive) is most commonly used. Flashpoint=95-140degF
- Extinguishing Media: Agents approved for Class B Hazards. Recommend AFFF.

Approved by  
/s/ Chief Robert Vogel