

# Fauquier County Department of Fire Rescue

## OPERATING PROCEDURE

No. 403

### Helicopter Operations

Effective Date: August 7, 2020


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Revision Date:

Forms:

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Approved By: Tom Marable, President VFRA



## PURPOSE

To establish procedures regarding the establishment of landing zones and personnel operations around helicopters.

## SCOPE

Applies to all personnel operating with the Fauquier County Department of Fire-Rescue as well as the Fauquier County Volunteer Fire and Rescue Association and its associated departments.

## I. PREFACE

Directions from the flight crew and/or Pilot supersede any information in the document.

Helicopter Air Ambulance (HAA) and Landing Zone (LZ) Operations are dynamic, low frequency, high stress events. Personnel must be proactive to protect the lives and safety of personnel, patients, and bystanders on scene of such an event.

Present day helicopters are commonly equipped with two to five rotor blades. The main blade is attached to the roof of the aircraft and turns at approximately 300-360 RPM, with tendency to flex and dip as much as four feet. During takeoff and landing, the movement of the main rotor is most dramatic. The spinning tail rotor turns at approximately 3,000-3,600 RPM, nearly invisible to the naked eye; this area of the HAA must be avoided.

## II. PROCEDURES

### A. PATIENT LOADING

1. The patient may be loaded while the helicopter is running (“hot”) or completely shut down (“cold”). The air crew will exit the HAA and make contact with ground crews. Ground crew should never approach the aircraft until advised to do so by the flight crew.
2. Never approach a helicopter from an upslope direction. (See below)

Desire to Serve

Ability to Perform

Courage to Act

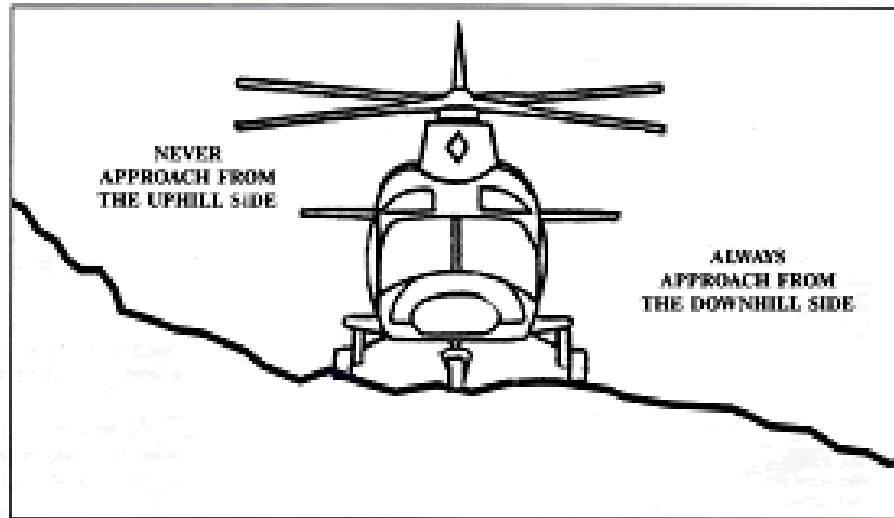
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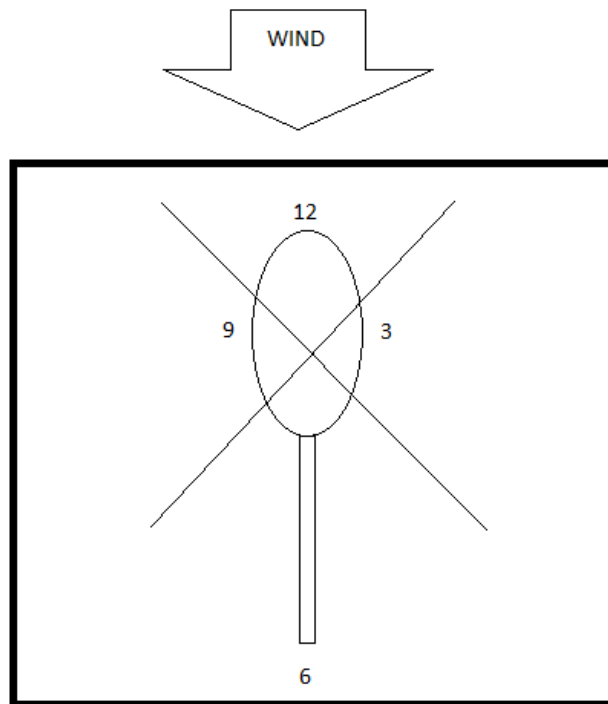
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3. The HAA is referred to in terms of a clock face from overhead perspective, with the nose of the aircraft as the 12 o'clock position. In the event approaching the aircraft without escort becomes necessary, individual(s) should remain at the perimeter of the landing zone in the pilots view at the 10 or 2 o'clock position and await signal from the pilot that it is safe to approach. Move to the 3 or 9 o'clock position, respectively, and approach the sides of the aircraft while maintaining situational awareness. (See below)



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## B. LANDING ZONE ESTABLISHMENT

1. Proper landing zone establishment will include the following:
  - a. Area requirement: 100' x 100' minimum
  - b. Flat, hard or grassy surface with no greater than 6° slope
  - c. Clearly marked Landing Zone utilizing traffic cones or lights without strobes
  - d. Clear of overhead obstructions including but not limited to power lines, poles, and trees
  - e. LZ and immediate area should be clear of debris, equipment, hazards, flares and anything that may become a projectile. Small obstacles such as stumps or rocks can damage the fuselage due to the close proximity to the ground.
  - f. Pedestrian and vehicle traffic must be controlled from entering the LZ.
  - g. If staffing permits, a single individual should be assigned at the 6 o'clock position 100 feet away to monitor tail rotor and intervene if safety violation(s) exist.

## C. COMMUNICATION

1. Communication to HAA shall be limited and reserved for the following personnel:
  - a. Engine Officer (or designated person) - for Landing Zone Brief and information as it pertains to wires, tree, poles and any other overhead obstructions in the vicinity, size and surface of the LZ and how the LZ is marked.
  - b. AIC of patient care (or designated person) - to relay information to Air Crew regarding patient report/care
  - c. Radio silence during landing and takeoff should be observed and communication should be reserved for safety concerns during these times.
  - d. During final approach for landing and the ground crew needs to prevent the aircraft from landing for safety reasons, "Abort, Abort, Abort" shall be transmitted over the land zoning radio channel.

## D. SAFETY EQUIPMENT

1. Personnel shall wear the following safety equipment while operating around a Helicopter Air Ambulance:
  - a. Eye protection - necessary to reduce but not eliminate incidents where the eye is exposed to dirt, rotor wash, and other debris while the main rotor is moving.
  - b. Ear protection - necessary to reduce damage to hearing, as the noise level can reach from 90-120dB (a shotgun blast is 120dB).

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- c. Helmet with chin strap – necessary to reduce but not eliminate incidents where the head is exposed to dirt and other debris while the main rotor is moving.

E. PPE HAZARD MITIGATION

Anything not secured has the potential to become a projectile or hazard with the ability to damage aircraft, personnel, patient, or bystanders.

1. Personnel shall take care to ensure that uniforms are worn correctly with no loose equipment, articles, or unattached objects.
2. The stretcher should be free of unsecured linen/patient packaging devices, clothing, and equipment.
3. Safety vests which have worn Velcro closures can be inadvertently torn off and damage the aircraft if entangled in either rotor; these should not be worn.