



## SAFETY PROCEDURES - IN AND AROUND HELICOPTERS

### BACKGROUND

Personnel and passengers have been injured, some fatally, in helicopter accidents which would not have occurred if properly briefed and basic safety procedures observed. Some accidents involve passengers who, unaware of the danger, walk toward the aircrafts tail rotor after deplaning. Some accidents result from passengers seated in the front of the aircraft inadvertently hitting the aircraft controls.

*Note: this is not an exhaustive list of safety procedures - the Civil Aviation Safety Authority should be contacted if necessary.*

### GENERAL

<b>1</b>	<p><b>Manual</b></p> <p>A manual should be prepared and kept current stating the policies and procedures for safety in and around helicopters - "Companies Operating Procedures".</p>
<b>2</b>	<p><b>Training</b></p> <p>Initial and recurrent training on a company's operating procedures should be provided.</p>
<b>3</b>	<p><b>Hand Signals</b></p> <p>Due to high noise factors associated with helicopters (it may be impossible to hear verbal communications), it is extremely important to use standardised hand signals.</p>

### FLIGHT CREW AND GROUND CREW PERSONNEL

<b>4</b>	<p><b>Pilots</b></p> <p><u>Rotorcraft Flight Manual</u> - pilots operating a civil aircraft (rotocraft) must comply with the operating limitations specified in the approved Rotorcraft Flight Manual.</p> <p><u>Cockpit Check Procedure/Checklist</u> - a pilot should use a cockpit check procedures or checklist appropriate to the aircraft and operation.</p> <p><u>Quick Turnaround</u> - pilots may use quick turnarounds (to avoid delays etc) and may leave the cockpit while the engine and rotors are turning - it is important that the following is observed by the pilot prior to disembarking:</p> <ul style="list-style-type: none"> <li>• Wind conditions safe,</li> <li>• Controls are secured,</li> <li>• Rotor and/or engine rpm reduced to ground idle,</li> <li>• Passengers are closely supervised, and</li> <li>• No unauthorised persons approach the aircraft.</li> </ul>
<b>5</b>	<p><b>Crewmembers (other than pilots)</b></p> <p><u>Groundcrew:</u></p> <p>Before a helicopter takeoff or landing, personnel should ensure that the helipad or area of operations is clear of all people, cargo, baggage or anything that might be blown around by the force of the downdraft,</p> <ul style="list-style-type: none"> <li>• Ensure that long pieces of equipment or tools are carried horizontally at or below waist level (never upright or at shoulder level),</li> <li>• Hard hats with straps and eye shields are worn, and</li> <li>• Ensure there is no loose cargo onboard the aircraft and all doors have been properly secured before departure.</li> </ul>

	<p><u>Mechanics:</u> Should ensure the helicopter is mechanically sound for the operation being conducted and should have the opportunity to observe and correct many potential safety problems that could occur on the ramp area. Specific areas where Mechanics should help are:</p> <ul style="list-style-type: none"> <li>• Foreign Object Damage,</li> <li>• Hard hats with straps and eye shields are worn,</li> <li>• Tool Accountability, and</li> <li>• Spill Removal.</li> </ul> <p><u>Fuel Servicing Personnel:</u> Fuel servicing personnel should be trained in the safe operation of fuelling equipment, in particular the following guidelines should be observed:</p> <ul style="list-style-type: none"> <li>• No smoking or carrying of lighters or matches,</li> <li>• Hard hats with straps and eye shields are worn,</li> <li>• Helicopter and fuelling vehicles should be grounded to dissipate static electricity,</li> <li>• If a spill occurs, refuelling should be stopped and fire safety precautions / procedures undertaken,</li> <li>• Ground power units should not be connected or disconnected during refuelling,</li> <li>• At the first sight of lightening in the area, refuelling operations should be suspended,</li> <li>• Refuel outside only, and</li> <li>• Refuelling should not occur with passengers on board the aircraft.</li> </ul> <p><u>External Load Riggers and Hookup Personnel:</u> Considering rigging and loading requirements change constantly all personnel should be trained in the companies safety policies and procedures, in particular:</p> <ul style="list-style-type: none"> <li>• Hard hats with straps and eye shields are worn,</li> <li>• Hand signals used during external load operations, and</li> <li>• Signalman should be in a position visible to the pilot and the hookup person located to one side of the flight path and as close to the operating area as possible with his/her back to the wind.</li> </ul>
<b>PASSENGERS</b>	
<b>6</b>	<p><b>Passenger Boarding</b> The pilot or other crew members should advise passengers to:</p> <ul style="list-style-type: none"> <li>• Stay away from the rear of the helicopter,</li> <li>• Crouch low before getting to and going under the main rotor,</li> <li>• Approach the helicopter from the side or front, but never out of the pilots line of vision,</li> <li>• Hold firmly to hats and loose articles,</li> <li>• Never reach up or dart after a hat or other object that might be blown off or away,</li> <li>• Protect eyes by shielding with a hand or by squinting,</li> <li>• If suddenly blinded by dust of blowing object, stop and crouch lower or sit down and wait for help,</li> <li>• Do not try to grope or feel the way to or from the helicopter,</li> <li>• Remain clear of an elevated heliport platform (roof top or helideck) until the pilot gives the signal to board the helicopter, and</li> <li>• If the takeoff site is on a hill, passengers should not approach or depart the helicopter on the upslope side. Avoid the area of lowest rotor clearance. Approach the helicopter from the front never the rear.</li> </ul>
<b>7</b>	<p><b>Passenger Briefing</b> The type of operation being conducted will dictate what type of briefing is necessary. For all flights, pre-takeoff briefings should include at least the following items:</p> <ul style="list-style-type: none"> <li>• The use of seat belts, including shoulder harnesses if installed,</li> <li>• Location and means of opening exists, egress procedures and for overwater flights ditching procedures and the use of flotation equipment,</li> <li>• Location and use of all emergency gear and survival equipment on board,</li> </ul>

	<p>appropriate to the type of operation conducted, and</p> <ul style="list-style-type: none"> <li>• Applicable smoking restrictions in the aircraft and on the ground and surrounds.</li> </ul>
<b>8</b>	<p><b>Passenger Precautions</b></p> <p>Appropriate to the terrain, landing site, and type of operation conducted, passengers should be instructed to:</p> <ul style="list-style-type: none"> <li>• Never unbuckle seatbelts in preparation for departing the helicopter until told to do so,</li> <li>• Never open any door (passenger or cargo) unless directed to do so by the pilot or another crewmember,</li> <li>• Never remove personal gear until instructed to do so,</li> <li>• Use caution when removing cargo from a helicopter so that the restraining devices do not become tangled in the main or tail rotors,</li> <li>• Depart downhill if the landing site is on a hill and always walk around the front of a helicopter, never the rear, when walking around the helicopter to avoid the area of lowest rotor clearance,</li> <li>• Use caution when exiting a helicopter especially if the helipad or helideck surface is metal and slippery or wet, and</li> <li>• Look for nets or ropes and watch for ground crewmembers using hand signals to give directions.</li> </ul>
<b>PASSENGER EMERGENCY PROCEDURES</b>	
<b>9.</b>	<p><b>Passenger Information</b></p> <p>A crewmember should always provide information for passengers in case of an emergency situation / landing. Aviation standards in relation to the aircraft should be used, and at a minimum the following should be advised:</p> <ul style="list-style-type: none"> <li>• preferred seating / body positions,</li> <li>• bracing for impact,</li> <li>• assistance required (if applicable).</li> </ul>
<b>CARGO</b>	
<b>10.</b>	<p>Cargo should be loaded by helicopter personnel. This helps ensure that the cargo is properly secured and the correct weight and location of the cargo is noted in the weight and balance computations for the flight.</p>
<b>HELICOPTER NOISE</b>	
<b>11.</b>	<p>Helicopter operations frequently occur in quiet areas where such operations required the use of noise abatement procedures. Pilots should be trained in techniques to minimise noise and be aware of noise sensitive areas.</p>