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Helicopter Doors Off / Removed Operations

For information

During a number of fire and land management helicopter operations conducted by the Agencies, there is a requirement for operations to be conducted with the helicopter doors secured open or removed. The most obvious being hover exit and rappel operations.

There is significant OH&S issues associated with doors open/removed operations:

- potential for loose items flying out and contacting rotors or being ingested into turbine engines,
- emergency landing and ground impact situations where personnel/limbs are flung out of open doors,
- cockpit comfort and safety affected by smoke/debris/insects entering the cockpit during operations and
- clarity of critical communications affected by additional airflow noise in cockpit.

Comments

The SAU has developed a procedure for doors open/removed operations, which has been approved by the agencies for inclusion in the Air Operations Manual.

1. The procedure states that all operational helicopter flights involving on-board Agency personnel shall be conducted with doors on and secured closed, except as specified in subsection 2.
2. Subject to operations being conducted in accordance with subsection's 3 to 17, an exemption to subsection 1. is provided for the following agency operations:
 - a) Agency hover exit, rappel and winch operations;
 - b) Agency fire crew transport operations into confined areas where a helicopter aircrewman is required;
 - c) Vertical referencing operations where a helicopter aircrewman is required;
 - d) Aerial photography/filming where a height 1000ft above ground level (AGL) can be maintained;

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- e) Dropping of lifesaving equipment as specified in Civil Aviation Order (CAO) 29.5;
 - f) Operations considered on a case by case basis and approved by the State Aircraft Coordinator or Manager State Aircraft Unit.
- 3 Any helicopter doors open/removed operation must be conducted in accordance with parameters specified in the aircraft flight manual.
 - 4 The minimum amount of doors open/removed to safely perform the task required is recommended.
Note: It is understood that in certain helicopter types if one door is required to be removed, all doors must be removed due to pressure differential.
 - 5 Where doors are secured open or removed for an operation, all loose items shall be removed from the cabin area or firmly secured including seat cushions.
Note: The security of seat cushions held in by Velcro is unreliable and as such these type of cushions should be removed during doors open/removed operations.
 - 6 The pilot must provide a specific briefing if doors are to be opened/closed in flight covering clearance from pilot, door operation and airspeed limitations.
 - 7 Doors open/removed operations may only be conducted if positive communications between pilot and on-board agency personnel can be maintained. *Note: Intercom with voice activated (Vox) microphones can sometimes turn on continuously with wind noise making them useless.*
 - 8 Agency personnel conducting sustained doors open/removed operations shall wear approved communications helmets and not communication headsets. *Note: An exemption is given for rappel and hover exit crewmembers and for firecrew transport operations and may be considered for aerial photography where proof can be provided that a helmet would interfere with the operation of the camera.*
 - 9 Ferry distances to any operational site with doors open/removed shall be minimised as much as possible.



- 10 At no stage during the flight shall any person be disconnected from the aircraft. Any person sitting in-line with an open/removed door shall be secured by either a seat belt or approved harness secured to an approved hard-point.
- 11 Agency personnel must stay in designated seats or operating position at all times. Personnel are not to sit on the floor with legs hanging out or stand out on the skids unless accredited persons conducting rappel or hover exit or winch operations.
- 12 Articles are not to be dropped from aircraft with exception to specific operations and must be in accordance with current regulations. Any instances of inadvertent dropping of articles must be reported to the SAU.
- 13 When using cameras, the camera is never to be held beyond the floor line of the helicopter. Cameras must have a safety strap and be attached to the agency person or aircraft. Larger cameras or equipment (in excess of 2kg) are to be tethered to the aircraft only and must have a quick release mechanism.
- 14 All unused seatbelts adjacent to an open/removed door must always be secured. *Note: Loose seat belts frequently fall outside and damage side of fuselage.*
- 15 No camera (still, digital or video) shall be operated in-flight, during a doors open/removed operation, without the person operating the camera wearing a secured harness. *Note: Due to body movement during filming, seatbelts have been known to snag on equipment or clothing and can be released.*
- 16 Use of harnesses during a doors open/removed operation must comply with the following:
 - a) Any harness must be fitted prior to boarding the aircraft and not in flight *and*
 - b) must be attached to an approved hard-point (looping them through seat belts is not acceptable) *and*
 - c) the length of the harness tether is to be adjusted so that the person cannot move any further than the designated

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- seating/operating position, ie. cannot fall and hang out of door *and*
- d) personnel wearing a harness must be briefed by the pilot on the harness emergency release mechanism(s) *and*
- e) a secondary escape method must be available for the person wearing the harness ie, quick release or harness cutter *and*
- f) personnel wearing a harness must be seated during take off and landing with a seat belt secured. Moving to and from an operating position must be with approval from the pilot. Doors may only be opened and closed with approval from the pilot *Note: Sliding doors may only be opened below certain airspeed.*

Action

That you should note the above comments and information and be aware that there is now more defined and clearer provisions associated with requirements for operations to be conducted with helicopter doors secured open or removed.

It is also important that you understand that the information and comments provided within this document is for your information. The authorised schedule for inclusion in the Air Operations Manual and subsequent promulgation will forwarded to the appropriate recipients shortly.

Further Information

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