CIVIL AVIATION SAFETY AUTHORITY OF PAPUA NEW GUINEA

SAFETY ALERT BULLETIN

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A SAB contains important safety information and may include recommended action. SAB content should be especially valuable to air operators in meeting their statutory duty to provide service with the highest degree of safety in the public interest. Besides the specific action(s) recommended in a SAB, an alternative action may be as effective in addressing the safety issue named in the SAB.

TITLE: Landing Performance Assessments at Time of Arrival.

OBJECTIVE: This SAB contains information and recommended actions that the Civil Aviation Safety Authority of Papua New Guinea (CASA PNG) recommends, for air operators and pilots to consider when developing methods to ensure sufficient landing distance exists to safely make a full-stop landing.

APPLICABILITY: This SAB is applicable to:

(1) all PNG air operators holding a part 119/121, part 119/125 and part 119/135 Air Operator Certification; and
(2) All non-AOC operations conducted under Part 91.

This guidance is independent of the pre-flight landing distance requirements of 121.223, 125.223, 135.223 and 91.217

BACKGROUND: The Federal Aviation Administration (FAA) conducted a review of incidents and accidents over the last 5 years and has identified several accidents where a Loss-of-Control (LOC) was encountered immediately after liftoff while light on the skids/gear, or from other issues caused by missed checklist items. Recently, PNG AIC released a preliminary accident investigation report of a Bell 407 helicopter which crashed at Kiunga aerodrome because the pilot was unaware that a 50ft longline was attached on lift-off – the investigation is still on-going.

Helicopters have the unique ability to take-off and land nearly anywhere. While this is among the helicopter's greatest attributes, it also can create scenarios leaving little room for error. The FAA review reported that several helicopter accidents have occurred as a result of pilots not bringing the helicopter to a stabilized hover before initiating take-off. Rather, pilots elected to immediately and rapidly take-off from the ground. In some cases, this has led to a LOC where the result was either an incident, or an accident resulting in significant damage to the helicopter and/or fatalities to those on board.

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Post-accident analysis indicated that the accident sequence began with indications that were evident when the helicopter was light on the skids, yet the pilot elected not to abort the take-off by reducing collective. Instead, the pilot continued pulling in collective (or continued manipulating the controls) resulting in a complete LOC. In many of these accidents, the helicopter was not properly configured for flight, either because a checklist item was missed, or because a checklist was not used at all by the pilot.

In other instances, pilots have attempted to perform either maximum performance or confined area Take-offs without completing a hover power and systems check. One accident resulted from a pilot attempting a take-off from the surface without completing a hover power check. As the aircraft lifted from a roof top helipad and over the edge of the rooftop, the aircraft lost altitude and crashed into a parking lot below. It was discovered that one of the two engines was in the "fly" position but the other engine was still in the idle position. If a hover check was performed before take-off, this accident could have been avoided.

CASA PNG RECOMMENDED ACTION(S): Based on the above, CASA PNG recommends that PNG Helicopter Air Operators review their standard operating procedures (SOPs) to ensure that pilots perform the following actions during the take-off sequence:

(1) Always ensure the area you are taking off from is sufficient for the conditions and the capabilities of the aircraft, as well as free and clear of debris that could pose a hazard to an aircraft.

(2) Using strict discipline and without compromise, pilots should ALWAYS USE an APPROPRIATE CHECKLIST to ensure the helicopter is properly configured for take-off.

(3) Unless prohibited by environmental conditions such as the possibility of whiteout, brownout, etc., always perform a hover check prior to take-off. If a take-off from the surface is required, perform the hover check, land, and then depart from the surface, taking the aircraft's performance into consideration.

(4) When performing a vertical take-off, raise the helicopter vertically from the surface to a normal hovering altitude (2 to 3 feet**)** with minimal lateral or longitudinal movement maintaining a constant heading. If at any time during initial collective pull the helicopter does not appear to be stabilized, ABORT the take-off by smoothly reducing the collective.

(5) Review the FAA Helicopter Flying Handbook, Chapter 9, Vertical Takeoff to a Hover and Chapter 10, Advanced Flight Maneuvers. https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/helicopter_flying_handbook/media/helicopter_flying_handbook.pdf

(6) For external load operations, Operators should review their checklists to ensure that they comply with Carriage of Persons (CAR 136.309); Weight Limitations (136.313); Carriage of loads (136.319) and Dangerous Goods (136.321) requirements amongst others.

OTHER REFERENCE INFORMATION: Other related information on the above can be found in:

1. FAA SAFO 16016, Helicopter Stabilized Hover Checks Before Departure. 15th November, 2016. http://www.faa.gov/news/press_releases/media/safo160167002.pdf.