Subject: Bell 407 Seats

Area of Concern: Bell 407 Helicopter Operations

Distribution: Aviation and Aviation Safety Managers, Unit Aviation Officers, Helicopter Managers, Helicopter Operations Specialists and Aviation Maintenance Inspectors

Issue: Certain Bell 407 helicopters have been retrofitted with a new seat kit that allows easier removal from the helicopter for cargo hauling. This quick release kit manufactured by Bell Helicopter was designed to expedite the removal of the seats to reconfigure for a medical litter.

Discussion: On 5/07/2008, The Grand Canyon National Park reported in SAFECOM 2008-214 that the left aft-facing seat bottom cushion was loose after doing a mock up with internal cargo. During the cargo sequence, the internal cargo was moved from the aft-facing right seat to the left door prior to dropping the cargo. When moving the cargo back across the seats, the bottom seat cushion was inadvertently released.

On 6/02/2008 the Malheur Rappel Base submitted SAFECOM 2008-269 in reference to this seat kit. The report stated that while performing mock-up rappel operations out of the Bell 407 with modification kit #CT 407-04-61, the inside hinge of the seat became disengaged from the holding fixtures when the rappellers were leaving their seats to go out to the skids. Upon re-entering the aircraft, a rappeller bumped the seat, causing the bottom seat to come off both hinges.

Recommendation: For all rear door-off helicopter operations, one of the following steps should be taken to resolve the loose seat and potential loss of seat hazard.

1. Reinstall the seat cushions to the original factory seat configuration, or
2. Have contractor maintenance personnel secure seat cushion in accordance with 14 CFR Part 43 Part 1 and Appendix A (minor alteration) which can be signed off by an A&P mechanic. The following is an example of a log book description of the corrective action by an A&P mechanic: "Added safety wire security to rear fwd facing seat bottoms, right and left attach fixtures of Bell Rear Seat Modification Kit, #CT-407-04-61; reference Bell Technical Bulletin #407-04-61 Rev. A - Installed double .025 safety wire through attach fixture and around seat forward cross bar in two places. A/C returned to service..." Signed off by an A&P.

David Burch, Bell Helicopter Customer Service Representative, has confirmed that the temporary fix is acceptable to Bell Helicopter. The company has developed an engineering change for the seat kit but it will take several weeks to get final approval from Transport Canada and the FAA.

The next page shows the photos of the safety wiring of the seats.
References:
1. Bell seat modification kit #CT 407-04-61:

2. Forest Service Aviation Maintenance Inspector, David Heydt, dheydt@fs.fed.us
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