Subject: Preventing Remote Hook Inadvertent Release

Area of Concern: Helicopter Operations

Distribution: All Aviation Users

Discussion: This provides additional information to the Lessons Learned Bulletin No. IA LL 18-05 Dropped External Load. The combination of a large load ring on the swivel and a remote hook has the potential for an inadvertent cargo release. Sometimes called dynamic rollout in the field, this is a condition where a load ring that is too large can cause an inadvertent release if the ring flips over the end of the load beam, pushes up against the keeper and then falls free (Figure 1).

Remote Cargo Hook Designs known to meet contract standards and alleviate the potential for an inadvertent load release. Manufacturers have developed several options that prevent the potential for dynamic rollout, accommodating a multitude of cargo ring sizes, including the large 4.5-inch ring commonly utilized in all agency aviation cargo operations. Options include a remote hook with a longer load beam (Figure 2) a caged remote hook (Figure 3).
Remote Cargo Hook Designs NOT meeting contract specifications.

Remote hooks modified by pinning of the Remote Hook Keeper (Figure 4). Although this modification seems to make sense in theory, the potential for a swivel to clear the load beam and solely rest on the keeper (a non-load bearing piece) remains. Given this potential the pinning of an existing keeper is not approved as a viable solution in retaining cargo or minimizing the likelihood of dynamic rollout.

Keeperless Remote Hooks (Figure 5), look like traditional hooks, however there are important operational differences. The Keeperless Remote Hook does not afford the ability to be loaded by a single-handed motion. Loading the hook is accomplished by turning the manual release located on the side of the hook with one hand, followed by the placement of the ring to the load beam with the other hand. Then, an upward movement must be initiated to close the hook for the locking mechanism to become engaged for the swivel ring to safely transport cargo.

The Keeperless Remote Hook is not approved at this time.

Next Steps:

Administrative: As of February 2021, agencies are beginning to take steps to further specify approved remote hooks through aviation contracts.

What you can do: Communicate the dangers of dynamic rollout by using this Safety Alert as a discussion point in annual refresher trainings and during daily 6 Minutes for Safety briefings. Please contact your respective aviation management specialist with any questions.

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