OAS-25A
(4/18)

Interagency Aviation SAFETY ALERT

Subject: External Load Rigging Failure

Area of Concern: Safety of Ground Personnel

Distribution: All Aviation Operations

Discussion: In July 2019, there were two instances in the USFS Pacific Northwest Region involving in-flight external load rigging failures. These events occurred under similar circumstances and were captured in SAFECOM #19-0320 and SAFECOM #19-0333. The project flights occurred within one day of each other and personnel for both projects chose to use non-commercial, non-certified, in-house made rigging equipment to "choke" or "cinch" bundled equipment. While in-flight, the rigging material failed resulting in lost loads. These failures were attributed to either slicing of webbing material or friction burns from improperly rigged loads shifting while in flight. Both projects were overseen by experienced helicopter managers and helicopter crewmembers and the load rigging/packaging was accepted by the pilots.

The NWCG Standards for Helicopter Operations (NSHO) asserts that equipment used as chokers should be rated appropriately and designed for lift work. This implies that equipment used for these activities should have manufacturer's data that verify load ratings, design purpose, and proper use as well as provide guidelines for inspection and care, and evidence of equipment age and origin.

Figure 1 Abrasion Wear on Non-Commercial Choker Equipment

Personnel conducting one of the projects were unable to determine the manufacturer and age of their equipment. To eliminate further risk for dropped loads, similar soft webbing rigging equipment was removed from service from both units due to uncertainty in its provenance and load rating.

The NSHO does provide some guidance regarding choker use. Chapter 09, Equipment Requirements and Maintenance, states:

1. Chokers are rated at different strengths. Ensure that equipment is rated appropriately and designed for lift work. Tow cables look like chokers, but are not designed for external load work. Chokers are not to be used as leadlines.

2. Leadlines are not designed to be used as chokers.

Lessons To Incorporate Into Your Next Lift Project:

1. Seek equipment that is purpose built for your aviation project need. Commercial lifting slings, chokers, and straps should have information describing weight limits, proper use, care, and maintenance instructions.

2. Equipment whose origin, service history, or age is unknown should not be used. Without this information it's difficult to gauge the integrity of the equipment.

3. Inspect rigging materials in accordance with the commercial criteria provided. If soft rigging is used, ensure that slings, chokers, or straps cinch to their greatest possible extent to reduce or eliminate play or shifting of the load.

4. Protect soft rigging material contact to exposed edges of loads. Unlike steel cables or chains, these materials are vulnerable to abrasion and cutting.

Shortcutting requirements eventually results in additional work and places others at risk.

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