



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

# SAFO

Safety Alert for Operators

SAFO 13010  
DATE: 11/4/13

Flight Standards Service  
Washington, DC

[http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/safo](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo)

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

**Subject:** Title 14 of the Code of Federal Regulations (14 CFR) part 133 and Spinning Loads

**Purpose:** This SAFO highlights current guidance and best-practices for part 133 operators who conduct external-load operations with non-human external cargo (NHEC).

**Background:** On December 15, 2012, a helicopter was conducting external-load operations under part 133 with a synthetic external-load line and no swivel device in use between the NHEC and the external-load line. During forward flight the continuously spinning load was inadvertently released due to a severed external-load line. The remaining external-load line then became entangled in the tail rotor. The helicopter impacted terrain, which caused substantial damage to the helicopter and serious injury to the pilot.

**Discussion:** Certain external loads have a tendency to rotate in flight, either intermittently or in the form of a sustained spin. The overall effects generally become more pronounced with an increase in the helicopter's speed. Without a swivel device placed in the load configuration, twisting of the line due to a spinning load could cause damage to the rigging, damage to the aircraft, and/or inadvertent release of the load. Damage could be exacerbated by nonmetal-to-metal at the attachment point. Use of a swivel allows the load to rotate freely in flight without twisting the line and also limits the torsional strain on the hook assembly. In load configurations with multiple net loads, swivels allow each net load to rotate independently in flight. If the load cannot be configured to prevent spinning, a swivel should be used whenever practical and circumstances dictate.

**Recommended Action:** Part 133 operators who conduct external-load operations with NHEC should include consideration for the appropriate control of spinning loads in the information section of the Rotorcraft-Load Combination Flight Manual required by § 133.47(c) and in standard operating procedures (SOP). The operator's procedures should provide the following guidelines:

- Pilots and ground personnel should be thoroughly trained and briefed.
- Equipment used in cargo rigging should be properly inspected and maintained.
- When rigging new loads, new load configurations, multiple net loads, or loads known to rotate in flight, the use of a swivel device should be considered.
- A swivel may not be needed or warranted, such as on certain specialized loads or when utilizing a swiveling cargo hook.

Operators should include this SAFO in initial and recurrent training programs for pilots and ground personnel.

**Related References:**

- Utilities, Patrol and Construction Committee, HAI, *UPAC Safety Guide for Helicopter Operators*
- National Wildfire Coordinating Group, *Interagency Helicopter Operations Guide*

**Contact:** Questions or comments regarding this SAFO should be directed to General Aviation and Commercial Division, AFS-800, via phone at 202-385-9600.