Aviation Investigation Final Report

Location:	Talkeetna, Alaska	**Accident Number:**	ANC12CA100
Date & Time:	August 31, 2012, 18:10 Local	**Registration:**	N178CH
Aircraft:	Aerospatiale AS350 B2	**Aircraft Damage:**	Substantial
Defining Event:	Miscellaneous/other	**Injuries:**	1 None
Flight Conducted Under:	Part 133: Rotorcraft ext. load		

Analysis

The pilot landed a high-skid, turbine-powered helicopter at a remote construction site, which contained several bags of cement that were covered by a plastic tarp. The plastic tarp was secured by a nylon strap that was wrapped around the bags. The pilot reported that after landing near the bags of cement, he retarded the engine throttle to flight idle to begin the mandatory 2-minute engine cool down procedure. During the engine cool down, the pilot felt an abrupt airframe vibration, so he immediately closed the engine throttle and performed an emergency engine shutdown. A postflight inspection revealed that the plastic tarp had dislodged from the nylon strap, and it subsequently became entangled in the tail rotor hub and blade assembly. As a result, the helicopter sustained substantial damage to the tail rotor drive system and tailboom. The pilot said there were no preaccident mechanical anomalies with the helicopter that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The entanglement of a plastic tarp in the helicopter's tail rotor after becoming dislodged from its securement.

Findings

Aircraft	Tail rotor drive shaft - Damaged/degraded
Environmental issues	Debris/dirt/foreign object - Effect on equipment

Factual Information

History of Flight

Standing-engine(s) operating	Miscellaneous/other (Defining event)

Pilot Information

Certificate:	Commercial	**Age:**	64,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	September 2, 2011
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	14000 hours (Total, all aircraft), 1000 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aerospatiale	**Registration:**	N178CH
Model/Series:	AS350 B2	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2042
Landing Gear Type:	High skid	**Seats:**	6
Date/Type of Last Inspection:	August 23, 2012 100 hour	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Turbo shaft
Airframe Total Time:	8741 Hrs at time of accident	**Engine Manufacturer:**	TURBOMECA
ELT:	C91A installed, not activated	**Engine Model/Series:**	Arriel
Registered Owner:	BELL LEASING LLC	**Rated Power:**	731 Horsepower
Operator:	LAST FRONTIER AIR VENTURE	**Operating Certificate(s) Held:**	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Unknown	**Visibility**	30 miles
Lowest Ceiling:	Overcast / 6000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Talkeetna, AK	**Type of Flight Plan Filed:**	Company VFR
Destination:	Talkeetna, AK	**Type of Clearance:**	None
Departure Time:	18:00 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	62.766666,-148.583328(est)

Administrative Information

Investigator In Charge (IIC):	Johnson, Clinton
Additional Participating Persons:	William K Bohman; Federal Aviation Administration; Anchorage, AK
Original Publish Date:	December 19, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=84925

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