



National Transportation Safety Board Aviation Accident Final Report

Location:	SUPAI, AZ	Accident Number:	LAX97LA030
Date & Time:	11/01/1996, 1230 MST	Registration:	N90144
Aircraft:	Bell 206B	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 133: Rotorcraft Ext. Load		

Analysis

The helicopter was being used in an external lift operation, moving supplies of salt to a storage location. The pilot reported that he was lifting to a hover over a loaded cargo net, unaware that the external load cable was draped over one of the skids. As the cable took the strain of the load, the helicopter rolled, and the lateral control limit was exceeded. The pilot released the load with an electrical switch; however, before control was regained, the helicopter contacted the ground, nose low, and the main rotor blades struck the ground. The pilot reported that from initial down-force on the skid until impact, the time frame was less than 4 seconds. He also reported no mechanical malfunction with the helicopter.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: improper routing of the external cargo hoist cable (over helicopter skid), which resulted in lateral imbalance and roll-over of the helicopter, as weight on the cable became effective.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: HOVER

Findings

1. (C) EXTERNAL LOAD EQUIPMENT - IMPROPER
2. (C) AIRCRAFT WEIGHT AND BALANCE - UNCONTROLLED
3. (C) REMEDIAL ACTION - NOT ATTAINED
4. AIRCRAFT CONTROL - NOT POSSIBLE
5. LOAD JETTISON

Occurrence #2: ROLL OVER
Phase of Operation: HOVER

Findings

6. DYNAMIC ROLLOVER

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On November 1, 1996, at 1230 hours mountain standard time, a Bell 206B helicopter, N90144, dynamically rolled over and crashed while lifting an external sling load from an uncharted mountainous helipad located near Supai, Arizona. The helicopter was owned and operated by Action Helo of Arizona, under 14 CFR Part 133 for the local flight. Visual meteorological conditions prevailed at the time of the accident and a company VFR flight plan had been filed for the operation. The helicopter was destroyed and property on the ground was damaged in the ensuing crash. The certificated commercial pilot, the sole occupant, sustained minor injuries.

In his written accident report, the pilot said that "while lifting to a hover over a cargo net external load, the 40 foot cable became fouled over the skid (left-right unknown). Control limits were exceeded with an increasing roll rate. The load was released by the electrical switch but the helicopter contacted the ground nose low striking main rotors to the ground. From initial down-force on [the] skid to impact[, it] was less than perhaps four seconds." The pilot also reported that there were no mechanical malfunctions with the helicopter.

Pilot Information

Certificate:	Commercial	Age:	50, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	12/12/1995
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	9970 hours (Total, all aircraft), 4150 hours (Total, this make and model), 9317 hours (Pilot In Command, all aircraft), 112 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N90144
Model/Series:	206B 206B	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	1623
Landing Gear Type:	Skid	Seats:	5
Date/Type of Last Inspection:	10/31/1996, Annual	Certified Max Gross Wt.:	3350 lbs
Time Since Last Inspection:	3 Hours	Engines:	1 Turbo Shaft
Airframe Total Time:		Engine Manufacturer:	Allison
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	250-C20B
Registered Owner:	DONALD A. PARRISH	Rated Power:	425 hp
Operator:	DONALD A. PARRISH	Operating Certificate(s) Held:	
Operator Does Business As:	ACTION HELO OF ARIZONA	Operator Designator Code:	PHDL

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Light and Variable /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	10° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	1230 MST	Type of Airspace:	Class G

Airport Information

Airport:	UNCHARTED HELIPORT	Runway Surface Type:	Asphalt
Airport Elevation:	5100 ft	Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	JEFF RICH	Report Date:	08/21/1997
Additional Participating Persons:	FRANK MOORE; LAS VEGAS, NV		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.ntsbt.gov/pubdms/ .		

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