



Aviation Investigation Final Report

Location:	Grand Lake, Louisiana	Accident Number:	FTW02LA186
Date & Time:	June 23, 2002, 11:30 Local	Registration:	N62446
Aircraft:	Bell 47G4	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

The pilot had just finished spray operations prior to taking two passengers to look over a marsh area he had just sprayed for them. As the helicopter was equipped with dual controls, the pilot cautioned the passengers not to touch anything. When the pilot brought the helicopter to a hover, approximately 6 to 12 inches off the ground, the helicopter tilted forward. The pilot added aft cyclic, but the helicopter continued to tilt forward. He attempted to add more aft cyclic, but felt the cyclic bind up and could not move it aft any further. The pilot lowered the collective in an attempt to land, but the helicopter tilted to the right. The right skid dug into the ground, and the helicopter experienced a dynamic rollover, coming to rest on its right side where it caught fire and was destroyed.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's inability to control the helicopter in a hover due to the restricted movement of the cyclic for undetermined reasons.

Findings

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

Findings

1. (C) ROTORCRAFT FLIGHT CONTROL, CYCLIC CONTROL - MOVEMENT RESTRICTED

2. (C) AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: HOVER

Findings

3. TERRAIN CONDITION - OPEN FIELD

Factual Information

On June 23, 2002, at 1130 central daylight time, a Bell 47G4 helicopter, N62446, was destroyed when it impacted terrain following a loss of control while hovering near Grand Lake, Louisiana. The helicopter was registered to and operated by Deep South Helicopters, Inc., Jennings, Louisiana. The commercial pilot and one passenger received minor injuries, and one passenger was not injured. Visual meteorological conditions prevailed for the 14 Code of Federal Regulations Part 91 observation flight, which was originating from an open field at the time of the accident, and no flight plan was filed.

According to the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2), and in a telephone interview with the NTSB investigator-in-charge, the pilot reported that he had just finished spray operations. The pilot then repositioned the helicopter to an open field prior to picking up two passengers he would take to survey the area he had just sprayed for them. The pilot occupied the left seat, one passenger occupied the center seat, and the remaining passenger occupied the right seat. As the helicopter was equipped with dual controls, the pilot cautioned both passengers "not to touch anything." The pilot reported that as he brought the helicopter to a hover, approximately 6 to 12 inches off the ground, the helicopter tilted forward "due to the forward center of gravity condition." The pilot added aft cyclic to counter the forward center of gravity condition; however, the helicopter continued to tilt forward. The pilot stated that "as I tried to add more aft cyclic, I felt the cyclic bind up and couldn't move it aft any further." He then lowered collective in an attempt to land, but the helicopter "tilted to the right." The right skid "dug" into the ground, and the helicopter experienced a dynamic rollover, coming to rest on its right side where it caught fire and was destroyed.

An FAA inspector, who traveled to the accident site, reported that control continuity could not be established due to the helicopter being destroyed by thermal and impact damage.

Pilot Information

Certificate:	Commercial	Age:	51, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	March 12, 2002
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 23, 2002
Flight Time:	21133 hours (Total, all aircraft), 1204 hours (Total, this make and model), 20850 hours (Pilot In Command, all aircraft), 375 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N62446
Model/Series:	47G4	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	7655
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	VO-540
Registered Owner:	Deep South Helicopters, Inc.	Rated Power:	300 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	D04G

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	LCH,15 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	16:53 Local	Direction from Accident Site:	20°
Lowest Cloud Condition:	Scattered / 4400 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	29°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hackberry, LA	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	11:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor, 1 None	Latitude, Longitude:	30.033332,-93.269996

Administrative Information

Investigator In Charge (IIC):	Little, Thomas
Additional Participating Persons:	Kelly L Teague; Federal Aviation Administration; Baton Rouge, LA
Original Publish Date:	April 1, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=55021

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).