



National Transportation Safety Board Aviation Accident Data Summary

Location:	SOUTH CARVER, MA	Accident Number:	NYC96LA135
Date & Time:	07/01/1996, 0600 EDT	Registration:	N444JB
Aircraft:	Bell 206B III	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot was doing aerial spraying of a cranberry bog, and had completed four passes before he executed a right turn to the north to begin the next run. After completing the turn, the helicopter began to spin to the right. After about three to four turns it stopped in a level hover, but then started spinning again to the right. After another three to four spins, it again stopped, and began a final spin to the right when it collided with the bog. Bell Helicopter Textron (BHT) published an Operations Safety Notice, in 1983, which dealt with unanticipated right yaw of the Bell 206 series. It stated that unanticipated right yaw could occur when maneuvering between hover and 30 MPH, and that a tail wind could reduce relative wind speed if a down wind translation occurred. It also stated that a loss of translational lift could result in a high power demand and an additional anti-torque requirements, which included high power demand situations such as low speed downwind turns. A local automated weather report indicated that the winds from were from 210 degrees at 6 knots. The pilot stated that the uncontrolled event initiated when he had completed a right hand application turn, and did not report a lateral cyclic displacement during the last application run.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain control of the helicopter during an aerial application maneuver. This put the helicopter in a low slow down wind, high power demand turn, where it encountered a loss of tail rotor effectiveness, and the subsequent collision with the marsh.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. LOSS OF TAIL ROTOR EFFECTIVENESS - ENCOUNTERED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

3. TERRAIN CONDITION - SWAMPY

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	32
Airplane Rating(s):		Instrument Rating(s):	None
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Helicopter
Flight Time:	3300 hours (Total, all aircraft), 450 hours (Total, this make and model), 2410 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N444JB
Model/Series:	206B III 206B III	Engines:	1 Turbo Shaft
Operator:	JOE BRIGHAM INC.	Engine Manufacturer:	Allison
Operating Certificate(s) Held:		Engine Model/Series:	250-C20
Flight Conducted Under:	Part 137: Agricultural		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Weather Information Source:	Pilot
Lowest Ceiling:	Overcast / 800 ft agl	Wind Speed/Gusts, Direction:	6 knots / , 210°
Temperature:	15° C	Visibility	4 Miles
Precipitation and Obscuration:			
Departure Point:	(NONE)	Destination:	

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	ROBERT L PEARCE	Adopted Date:	02/01/1997
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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