



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Caledonia, Michigan	Accident Number:	GAA15CA102
Date & Time:	May 29, 2015, 12:10 Local	Registration:	N206ED
Aircraft:	Bell 206 - B11	Aircraft Damage:	Substantial
Defining Event:	Loss of tail rotor effectiveness	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

The pilot and passenger were conducting an aerial observation flight at low altitude to inspect power lines. The pilot stated he maneuvered to do a right turn and encountered a gust of wind. The pilot lost tail rotor effectiveness and attempted to recover control of the helicopter. Before the pilot could regain full control, the helicopter descended into the tree tops and came to rest in a tree. The helicopter sustained substantial damage to the tail boom. The pilot reported no preimpact mechanical failures or malfunctions with the airframe or engine 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: A loss of tail rotor effectiveness while maneuvering at low altitude, resulting in a collision with trees.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Prop/rotor parameters - Not attained/maintained
Environmental issues	Tree(s) - Contributed to outcome
Environmental issues	Gusts - Effect on operation

Factual Information

History of Flight

Maneuvering	Low altitude operation/event
Maneuvering	Loss of tail rotor effectiveness (Defining event)
Maneuvering	Attempted remediation/recovery
Emergency descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial	Age:	55
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter; Instrument helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	February 18, 2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	October 12, 2013
Flight Time:	(Estimated) 1454 hours (Total, all aircraft), 425 hours (Total, this make and model), 1407 hours (Pilot In Command, all aircraft), 100 hours (Last 90 days, all aircraft), 36 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N206ED
Model/Series:	206 - B11 B	Aircraft Category:	Helicopter
Year of Manufacture:	1976	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1958
Landing Gear Type:	High skid	Seats:	5
Date/Type of Last Inspection:	December 11, 2014 Annual	Certified Max Gross Wt.:	3200 lbs
Time Since Last Inspection:		Engines:	1 Turbo shaft
Airframe Total Time:	9618.5 Hrs at time of accident	Engine Manufacturer:	Rolls Royce
ELT:	Not installed	Engine Model/Series:	C20B
Registered Owner:	Hawkeye Helicopter	Rated Power:	420 Horsepower
Operator:	Hawkeye Helicopter	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KGRR, 803 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	338°
Lowest Cloud Condition:	Scattered / 8500 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 23000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	14 knots / None	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	26°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Jackson, MI (KJXN)	Type of Flight Plan Filed:	None
Destination:	Grand Rapids, MI (KGRR)	Type of Clearance:	VFR
Departure Time:	10:00 Local	Type of Airspace:	Class C

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	42.822498,-85.491386(est)

Administrative Information

Investigator In Charge (IIC):	Bigelow, Bradley
Additional Participating Persons:	Thomas G Kozura; Federal Aviation Administration; Grand Rapids, MI
Original Publish Date:	July 27, 2015
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.nts.gov/Docket?ProjectID=91292

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