



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Crestview, Florida	Accident Number:	ERA24LA215
Date & Time:	May 10, 2024, 15:25 Local	Registration:	N969VS
Aircraft:	Hughes 369	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

On the day of the accident, the pilot had been practicing autorotations. The first was a power-on autorotation to the ground, followed by two hovering autorotations, all of which were uneventful. The pilot then briefed and set up for a power off autorotation to the ground. The entry began at 600 ft above ground level (agl) and the glide was normal. He set up a 70-knot glide speed and added collective to keep the rotor at 480 rpm. The helicopter was heavy with fuel and the added pilot-rated passenger, so the decent was faster than anticipated. The pilot reported that at 40 ft agl, he accomplished an “auto-rotative flare attitude” and that the “flare was not aggressive enough for the weight,” and as a result, he held the flare longer than usual. The ground speed bled off, but the leveling of the helicopter was not accomplished in a timely manner. The tail skid contacted the ground hard and the main rotor blades flexed down resulting in contact with the tail boom and the fuselage behind the rotor head. The helicopter’s tailboom and main rotor blades were substantially damaged. The pilot reported that there were no pre-accident mechanic malfunctions or failures 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 pilot’s improper flare, which resulted in a hard landing and the main rotor blades contacting the tail boom.

Findings

Personnel issues

Aircraft control - Pilot

Aircraft

Landing flare - Not attained/maintained

Factual Information

History of Flight

Autorotation	Hard landing (Defining event)
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Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	61,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Instrument helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	September 18, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	June 20, 2023
Flight Time:	9719 hours (Total, all aircraft), 219 hours (Total, this make and model), 8026 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft)		

Pilot-rated passenger Information

Certificate:	Airline transport; Flight instructor	Age:	64,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter; Instrument helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	September 5, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 25, 2023
Flight Time:	10790 hours (Total, all aircraft), 73 hours (Total, this make and model), 8628 hours (Pilot In Command, all aircraft), 18 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	Registration:	N969VS
Model/Series:	369 D	Aircraft Category:	Helicopter
Year of Manufacture:	1980	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1100833D
Landing Gear Type:	High skid	Seats:	4
Date/Type of Last Inspection:	December 4, 2023 100 hour	Certified Max Gross Wt.:	3000 lbs
Time Since Last Inspection:	14.2 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	17976.8 Hrs at time of accident	Engine Manufacturer:	Rolls Royce
ELT:		Engine Model/Series:	250-C20B
Registered Owner:	VERTOL SYSTEMS CO INC	Rated Power:	420 Horsepower
Operator:	VERTOL SYSTEMS CO INC	Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CEW,155 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	120°
Lowest Cloud Condition:	Scattered / 1900 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 2400 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.85 inches Hg	Temperature/Dew Point:	27°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Crestview, FL	Type of Flight Plan Filed:	None
Destination:	Crestview, FL	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class E

Airport Information

Airport:	BOB SIKES CEW	Runway Surface Type:	
Airport Elevation:	213 ft msl	Runway Surface Condition:	Dry;Soft;Vegetation
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	30.777641,-86.52027(est)

Administrative Information

Investigator In Charge (IIC):	Enders, Ryan
Additional Participating Persons:	Clayton Caessens; FAA/FSDO; Birmingham, AL
Original Publish Date:	June 21, 2024
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=194239

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](#).