



Aviation Investigation Final Report

Location:	Titusville, Florida	Accident Number:	ERA23LA146
Date & Time:	March 9, 2023, 17:00 Local	Registration:	N8911F
Aircraft:	Hughes 269A	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The flight instructor reported that he was demonstrating a 180° autorotation for his passenger into an open field off airport grounds. Nearing the end of the maneuver, prior to touchdown, he failed to recover engine power in a timely manner which resulted in the rapid decay of the rotor rpm at low altitude; this resulted in a hard landing that subsequently caused the main rotor blades to make contact with the tail boom and severed the tail rotor driveshaft. The helicopter sustained substantial damage to the fuselage and the main rotor blades. The pilot reported that there were no pre accident mechanical malfunctions 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 failure to maintain adequate main rotor RPM during an autorotation which resulted in a hard landing and subsequent rotor blade strike of the tail boom.

Findings

Personnel issues	Delayed action - Pilot
Aircraft	Recip engine power section - Simulated malf/failure
Aircraft	Prop/rotor parameters - Capability exceeded
Aircraft	Descent rate - Not attained/maintained

Factual Information

History of Flight

Emergency descent	Simulated/training event
Autorotation	Hard landing (Defining event)

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	41,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Instrument airplane; Instrument helicopter	Toxicology Performed:	
Medical Certification:	Class 1 None	Last FAA Medical Exam:	December 20, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	8567 hours (Total, all aircraft), 97 hours (Total, this make and model), 3380 hours (Pilot In Command, all aircraft), 103 hours (Last 90 days, all aircraft), 41 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Passenger Information

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

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	Registration:	N8911F
Model/Series:	269A	Aircraft Category:	Helicopter
Year of Manufacture:	1963	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	0230
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	January 22, 2023 Annual	Certified Max Gross Wt.:	1650 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2581 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	IO-360-B1B
Registered Owner:	A & J Aviation Services LLC.	Rated Power:	180 Horsepower
Operator:	A & J Aviation Services LLC.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	TIX, 35 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	15:48 Local	Direction from Accident Site:	321°
Lowest Cloud Condition:	Scattered / 4200 ft AGL	Visibility	7 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	26°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Titusville, FL (TIX)	Type of Flight Plan Filed:	None
Destination:	Titusville, FL (TIX)	Type of Clearance:	None
Departure Time:	16:15 Local	Type of Airspace:	Class G

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:	28.509321,-80.793006(est)

Administrative Information

Investigator In Charge (IIC):	Mccarter, Lawrence
Additional Participating Persons:	James M Holmes; FAA FSDO; Orlando, FL
Original Publish Date:	June 23, 2023
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=106856

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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](#).