



National Transportation Safety Board Aviation Accident Factual Report

Location:	St Louis, MO	Accident Number:	CEN20CA326
Date & Time:	08/06/2020, 1515 CDT	Registration:	N911EP
Aircraft:	Hughes 369A	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	2 None
Flight Conducted Under:	Public Aircraft		

The flight instructor and pilot were conducting a helicopter training flight. Each pilot had performed several maneuvers, such as confined approach, slope landing, settling with power, and maximum performance takeoffs. They then flew to another airport where they conducted several practice emergency procedures; quick stops, stuck pedals, and auto rotations. They then returned to their home airfield, where they contacted the tower controller, who reported calm wind and cleared them to land. The instructor reported he was manipulating the controls and accepted the option to land on the taxiway; he decreased the throttle for a full touchdown auto rotation. About 50 ft above the ground (agl), he flared the helicopter and leveled off about 5 to 10 ft agl. The instructor reported that everything seemed "normal" at this point. He then raised the collective, but the descent was not arrested, so he raised the collective full up. The helicopter landed hard and shook violently. The instructor closed the throttle to which stopped the fuel supply.

The instructor added that he felt a slight tailwind after exiting the helicopter and that the tail wind caused a "vortex ring state" which stalled the main rotor blades.

Examination of the helicopter found that the main rotor blades had impacted the tailboom, severing the boom, just in front of the tail rotor blades

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	51
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	06/22/2020
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	6814 hours (Total, all aircraft), 6814 hours (Total, this make and model), 6338 hours (Pilot In Command, all aircraft)		

Pilot Information

Certificate:	Commercial	Age:	39
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without Waivers/Limitations	Last FAA Medical Exam:	06/29/2020
Occupational Pilot:	No	Last Flight Review or Equivalent:	06/18/2020
Flight Time:	635 hours (Total, all aircraft), 91 hours (Total, this make and model), 585 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	Registration:	N911EP
Model/Series:	369A No Series	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	591176
Landing Gear Type:	Skid	Seats:	
Date/Type of Last Inspection:	08/04/2020, 100 Hour	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	Turbo Shaft
Airframe Total Time:	1229.4 Hours at time of accident	Engine Manufacturer:	Rolls Royce
ELT:	C91 installed, activated, did not aid in locating accident	Engine Model/Series:	250-c20C
Registered Owner:	St Louis County Police Department	Rated Power:	
Operator:	St Louis County Police Department	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:	1454 CDT	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 25000 ft agl	Visibility	10 Miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	27° C / 13° C
Precipitation and Obscuration:	No Precipitation		
Departure Point:	St Louis, MO (KSUS)	Type of Flight Plan Filed:	
Destination:	St Louis, MO (KSUS)	Type of Clearance:	VFR
Departure Time:	CDT	Type of Airspace:	Class D

Airport Information

Airport:	Spirit of St Louis Airport (KSUS)	Runway Surface Type:	Unknown
Airport Elevation:	463 ft	Runway Surface Condition:	Dry
Runway Used:	N/A	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:	38.663611, -90.644722 (est)

Administrative Information

Investigator In Charge (IIC):	Craig Hatch
Additional Participating Persons:	William Grubb; FAA FSDO; St Louis, MO
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=101751