



# Aviation Investigation Final Report

<b>Location:</b>	Ridgeway, Pennsylvania	<b>Accident Number:</b>	GAA18CA506
<b>Date &amp; Time:</b>	August 22, 2018, 11:26 Local	<b>Registration:</b>	N89ZC
<b>Aircraft:</b>	Hughes 369	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Controlled flight into terr/obj (CFIT)	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Aerial observation		

## Analysis

The pilot reported that, after a high reconnaissance of the area, he descended the helicopter to about 30 ft above power lines to inspect them while flying about 30 to 35 knots. While patrolling, he climbed over an identified crossing line and then initiated a descent. During the descent, the passenger spotted a previously unseen power line in their flightpath, so the pilot "pulled hard aft cyclic with right pedal," but the main rotor blades struck the power line. The helicopter's main rotor system began vibrating, but the pilot was able to land without further incident.

The helicopter sustained substantial damage to the main rotor blades.

The pilot reported that there were no preaccident mechanical failures or 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 clearance from power lines during an aerial observation flight.

## Findings

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<b>Aircraft</b>	Main rotor blade system - Damaged/degraded
<b>Personnel issues</b>	Identification/recognition - Pilot
<b>Environmental issues</b>	Wire - Effect on equipment
<b>Personnel issues</b>	Monitoring environment - Pilot

## Factual Information

### History of Flight

<b>Maneuvering-low-alt flying</b>	Low altitude operation/event
<b>Maneuvering</b>	Controlled flight into terr/obj (CFIT) (Defining event)
<b>Maneuvering-low-alt flying</b>	Off-field or emergency landing

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	41, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	November 1, 2017
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	August 25, 2017
<b>Flight Time:</b>	(Estimated) 2354 hours (Total, all aircraft), 594 hours (Total, this make and model), 2263 hours (Pilot In Command, all aircraft), 138 hours (Last 90 days, all aircraft), 29 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Hughes	<b>Registration:</b>	N89ZC
<b>Model/Series:</b>	369 D	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1981	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	1098D
<b>Landing Gear Type:</b>	High skid	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	100 hour	<b>Certified Max Gross Wt.:</b>	3000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Rolls Royce
<b>ELT:</b>		<b>Engine Model/Series:</b>	250-C20B
<b>Registered Owner:</b>	Dah Aircraft Llc	<b>Rated Power:</b>	
<b>Operator:</b>	Rotor Blade LLC	<b>Operating Certificate(s) Held:</b>	Rotorcraft external load (133)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Dawn
<b>Observation Facility, Elevation:</b>	KDUJ,1805 ft msl	<b>Distance from Accident Site:</b>	20 Nautical Miles
<b>Observation Time:</b>	16:02 Local	<b>Direction from Accident Site:</b>	228°
<b>Lowest Cloud Condition:</b>		<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Overcast / 1800 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.87 inches Hg	<b>Temperature/Dew Point:</b>	22°C / 16°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	St Marys, PA (OYM )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	St Marys, PA (OYM )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:15 Local	<b>Type of Airspace:</b>	Class E

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	41.401111,-78.561386(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Nepomuceno, Eleazar
<b>Additional Participating Persons:</b>	Laura Delewski; FAA; Allegheny , PA
<b>Original Publish Date:</b>	March 20, 2020
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=98147">https://data.nts.gov/Docket?ProjectID=98147</a>

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