



# Aviation Investigation Final Report

<b>Location:</b>	LOWELL, Michigan	<b>Accident Number:</b>	CHI86LA124
<b>Date &amp; Time:</b>	April 12, 1986, 11:30 Local	<b>Registration:</b>	N8059H
<b>Aircraft:</b>	HUGHES 269A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

THE PILOT HAD JUST COMPLETED TWO AUTOROTATIONS WHEN HE LANDED HARD ON THE THIRD. THE MAIN ROTOR FLEXED DOWN SEVERING THE TAILBOOM AND TAILROTOR. ALTHOUGH THE PILOT HAD LOGGED OVER 6000 HOURS FLIGHT TIME, HE HAD ONLY 51 HOURS TOTAL ROTORCRAFT TIME. HE HAD RECEIVED HIS COMMERCIAL HELICOPTER RATING SIX MONTH PRIOR TO THE ACCIDENT. HE HAD LOGGED 2.5 HOURS HELICOPTER TIME IN THE PREVIOUS 180 DAYS.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

### Findings

Occurrence #1: HARD LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

- Findings
1. (F) IN-FLIGHT PLANNING/DECISION - POOR - PILOT IN COMMAND
  2. (C) LACK OF RECENT EXPERIENCE - PILOT IN COMMAND
  3. (F) JUDGMENT - POOR - PILOT IN COMMAND
  4. (F) AUTOROTATION - MISJUDGED - PILOT IN COMMAND
  5. (C) REMEDIAL ACTION - MISJUDGED - PILOT IN COMMAND
-

Occurrence #2: PROPELLER/ROTOR CONTACT TO PERSON  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline transport; Flight instructor	<b>Age:</b>	38, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Glider; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	February 13, 1986
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	6000 hours (Total, all aircraft), 40 hours (Total, this make and model), 6082 hours (Pilot In Command, all aircraft), 52 hours (Last 90 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	HUGHES	<b>Registration:</b>	N8059H
<b>Model/Series:</b>	269A 269A	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	36-0489
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	January 1, 1986 Annual	<b>Certified Max Gross Wt.:</b>	1550 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3015 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-360-C2D
<b>Registered Owner:</b>		<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	GRAND RAPIDS SCHOOL OF BIBLE	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	GRR ,794 ft msl	<b>Distance from Accident Site:</b>	9 Nautical Miles
<b>Observation Time:</b>	11:50 Local	<b>Direction from Accident Site:</b>	240°
<b>Lowest Cloud Condition:</b>	25000 ft AGL	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	40°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	11°C / -3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	LOWELL , MI (24C)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	LOWELL , MI (24C)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	11:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	LOWELL CITY 24C	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	681 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	36	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	1900 ft	<b>VFR Approach/Landing:</b>	Simulated forced landing;Traffic pattern

## 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>	42.930313,-85.34082(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Sebastian, Ronald
<b>Additional Participating Persons:</b>	CHARLES PINE; GRAND RAPIDS , MI
<b>Original Publish Date:</b>	
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=13447">https://data.ntsb.gov/Docket?ProjectID=13447</a>

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](#).