



# Aviation Investigation Final Report

<b>Location:</b>	Palmer, Alaska	<b>Accident Number:</b>	ANC24LA009
<b>Date &amp; Time:</b>	December 26, 2023, 10:49 Local	<b>Registration:</b>	N21FY
<b>Aircraft:</b>	AIRBUS HELICOPTERS INC AS350B3	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Dynamic rollover	<b>Injuries:</b>	3 Minor, 4 None
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled - Sightseeing		

## Analysis

The pilot stated that while on approach to land at a remote, snow-covered glacial site, with flat light conditions present, he lost “positive” visual reference, but believed he was in a stable hover. Subsequently, the left landing gear skid contacted the snow-covered terrain, and the helicopter entered a dynamic rollover to the left, resulting in substantial damage to the fuselage, tail boom, and powertrain system. The pilot reported that there were no preaccident mechanical malfunctions or anomalies 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 snow-covered terrain during the landing approach in flat light conditions.

## Findings

<b>Aircraft</b>	Altitude - Not attained/maintained
<b>Environmental issues</b>	Flat light - Contributed to outcome
<b>Personnel issues</b>	Identification/recognition - Pilot

## Factual Information

### History of Flight

Landing	Dynamic rollover (Defining event)
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### Pilot Information

Certificate:	Commercial; Flight instructor	Age:	31,Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	May 11, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 13, 2023
Flight Time:	2785 hours (Total, all aircraft), 308 hours (Total, this make and model), 2699 hours (Pilot In Command, all aircraft), 74 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

### Passenger Information

Certificate:	Age:
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:	Last Flight Review or Equivalent:
Flight Time:	

## Passenger Information

Certificate:	Age:	
Airplane Rating(s):	Seat Occupied:	Center
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:	Last Flight Review or Equivalent:	
Flight Time:		

## Passenger Information

Certificate:	Age:	
Airplane Rating(s):	Seat Occupied:	Center
Other Aircraft Rating(s):	Restraint Used:	3-point
Instrument Rating(s):	Second Pilot Present:	No
Instructor Rating(s):	Toxicology Performed:	
Medical Certification:	Last FAA Medical Exam:	
Occupational Pilot:	Last Flight Review or Equivalent:	
Flight Time:		

## Passenger Information

Certificate:	Age:	
Airplane Rating(s):	Seat Occupied:	Center
Other Aircraft Rating(s):	Restraint Used:	3-point
Instrument Rating(s):	Second Pilot Present:	No
Instructor Rating(s):	Toxicology Performed:	
Medical Certification:	Last FAA Medical Exam:	
Occupational Pilot:	Last Flight Review or Equivalent:	
Flight Time:		

## Passenger Information

Certificate:	Age:	
Airplane Rating(s):	Seat Occupied:	Center
Other Aircraft Rating(s):	Restraint Used:	3-point
Instrument Rating(s):	Second Pilot Present:	No
Instructor Rating(s):	Toxicology Performed:	
Medical Certification:	Last FAA Medical Exam:	
Occupational Pilot:	Last Flight Review or Equivalent:	
Flight Time:		

## Passenger Information

Certificate:	Age:	
Airplane Rating(s):	Seat Occupied:	Left
Other Aircraft Rating(s):	Restraint Used:	3-point
Instrument Rating(s):	Second Pilot Present:	No
Instructor Rating(s):	Toxicology Performed:	
Medical Certification:	Last FAA Medical Exam:	
Occupational Pilot:	Last Flight Review or Equivalent:	
Flight Time:		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AIRBUS HELICOPTERS INC	<b>Registration:</b>	N21FY
<b>Model/Series:</b>	AS350B3	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	2022	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	9116
<b>Landing Gear Type:</b>	None; High skid	<b>Seats:</b>	7
<b>Date/Type of Last Inspection:</b>	December 21, 2023 Annual	<b>Certified Max Gross Wt.:</b>	5225 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>	1184.3 Hrs at time of accident	<b>Engine Manufacturer:</b>	SAFRAN
<b>ELT:</b>	C126 installed, not activated	<b>Engine Model/Series:</b>	ARRIEL 2D
<b>Registered Owner:</b>	H125 AVIATION LLC	<b>Rated Power:</b>	952 Horsepower
<b>Operator:</b>	Alpha Aviation LLC	<b>Operating Certificate(s) Held:</b>	Rotorcraft external load (133), On-demand air taxi (135), Agricultural aircraft (137)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	4ZDA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Dawn
<b>Observation Facility, Elevation:</b>	PAAQ,233 ft msl	<b>Distance from Accident Site:</b>	26 Nautical Miles
<b>Observation Time:</b>	10:53 Local	<b>Direction from Accident Site:</b>	322°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	330°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.53 inches Hg	<b>Temperature/Dew Point:</b>	-17°C / -21°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Palmer, AK (O3AN)	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	Palmer, AK (O3AN)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:40 Local	<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 Minor, 4 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 Minor, 4 None	<b>Latitude, Longitude:</b>	61.252209,-148.53131

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Ward, Mark
<b>Additional Participating Persons:</b>	Scott Norman; FAA; AK
<b>Original Publish Date:</b>	August 30, 2024
<b>Last Revision Date:</b>	September 10, 2024
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=193569">https://data.nts.gov/Docket?ProjectID=193569</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](#).