



# Aviation Investigation Final Report

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<b>Location:</b>	Valdez, Alaska	<b>Accident Number:</b>	ANC22LA023
<b>Date &amp; Time:</b>	March 15, 2022, 15:00 Local	<b>Registration:</b>	N99676
<b>Aircraft:</b>	Eurocopter AS 350 BA	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Collision during takeoff/land	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled		

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## Analysis

The pilot reported that the helicopter was being used to transport skiers in support of a commercial Heli-ski operation when the helicopter inadvertently collided with terrain while maneuvering to land on the glacier.

The pilot stated that while on approach to an area to pick up a group of skiers, flat light conditions made it difficult to discern topographical features on the snow-covered, featureless, glacial terrain. The pilot said that during the approach, he inadvertently allowed the helicopter to descend below his intended approach path, and the helicopter touched down short of his intended landing site. The helicopter subsequently rolled to the left and the main rotor blades struck the snow-covered terrain. The helicopter sustained substantial damage to the main rotor blades, tail rotor blades, tail boom, and fuselage.

The pilot reported that there were no pre-accident mechanical malfunctions or failures 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 a proper approach path in flat light conditions, which resulted in landing short of the intended landing spot and impact with terrain.

## Findings

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<b>Personnel issues</b>	Visual illusion/disorientation - Pilot
<b>Environmental issues</b>	Flat light - Contributed to outcome

## Factual Information

### History of Flight

<b>Approach</b>	Collision during takeoff/land (Defining event)
<b>Landing</b>	Roll over

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	51, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Front
<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>	Helicopter; Instrument helicopter	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	April 16, 2021
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	May 22, 2021
<b>Flight Time:</b>	9779 hours (Total, all aircraft), 9978 hours (Pilot In Command, all aircraft), 49 hours (Last 90 days, all aircraft), 34 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Eurocopter	<b>Registration:</b>	N99676
<b>Model/Series:</b>	AS 350 BA	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1982	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	1542
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	7
<b>Date/Type of Last Inspection:</b>	February 16, 2022 100 hour	<b>Certified Max Gross Wt.:</b>	4961 lbs
<b>Time Since Last Inspection:</b>	39.6 Hrs	<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>	16258 Hrs as of last inspection	<b>Engine Manufacturer:</b>	HONEYWELL
<b>ELT:</b>	C126 installed, not activated	<b>Engine Model/Series:</b>	LTS101-600A3A
<b>Registered Owner:</b>	ALPINE AIR ALASKA LLC	<b>Rated Power:</b>	732 Horsepower
<b>Operator:</b>	ALPINE AIR ALASKA 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>	YDAA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	PAVD,60 ft msl	<b>Distance from Accident Site:</b>	13 Nautical Miles
<b>Observation Time:</b>	15:56 Local	<b>Direction from Accident Site:</b>	234°
<b>Lowest Cloud Condition:</b>	Few / 3400 ft AGL	<b>Visibility</b>	8 miles
<b>Lowest Ceiling:</b>	Broken / 4800 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	260°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.47 inches Hg	<b>Temperature/Dew Point:</b>	-2°C / -9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	16 Mile, AK	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	Tsania Valley, AK	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:00 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>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	61.262204,-145.87494(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Ward, Mark
<b>Additional Participating Persons:</b>	Brad Sapp; FAA- Juneau Flight Standards District Office; Juneau , AK
<b>Original Publish Date:</b>	July 5, 2022
<b>Last Revision Date:</b>	
<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.ntsb.gov/Docket?ProjectID=104788">https://data.ntsb.gov/Docket?ProjectID=104788</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](#).