



# Aviation Investigation Final Report

<b>Location:</b>	HUGHES, Alaska	<b>Accident Number:</b>	ANC98LA150
<b>Date &amp; Time:</b>	September 10, 1998, 15:00 Local	<b>Registration:</b>	N7380U
<b>Aircraft:</b>	Cessna 207A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled		

## Analysis

The certificated airline transport pilot was landing in an uphill direction at a remote airport as part of an on-demand air taxi flight. The runway was 4,100 feet long, and 120 feet wide, with an uphill gradient of 7.1 percent. For the runway selected by the pilot, a tail wind of 20 knots, with gusts to 24 knots, was present. During the landing flare, about 3 feet above the runway, the pilot said he encountered a gust of wind, or wind shear. The airplane stalled, and contacted the runway hard on the main landing gear. After landing, the pilot reported he inspected the airplane for damage but did not notice any. The following day, the pilot noticed the aft tie-down ring, and tail skid, located on the underside of the tail cone, was broken off the airplane. In addition, the airplane received damage to the aft empennage bulkhead, and adjacent fuselage structure.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate compensation for the wind conditions, and an inadvertent stall. A factor in the accident was the presence of a tail wind.

## Findings

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

Findings

1. AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - UPHILL
2. (F) WEATHER CONDITION - TAILWIND
3. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND
4. (C) STALL - INADVERTENT - PILOT IN COMMAND

## Factual Information

On September 10, 1998, about 1500 Alaska daylight time, a wheel equipped Cessna 207A airplane, N7380U, sustained substantial damage during landing at a remote airport, about 13 miles east of Hughes, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country on-demand passenger flight under Title 14 CFR Part 135 when the accident occurred. The airplane was operated by Warbelow's Air Ventures Inc., Fairbanks, Alaska. The certificated airline transport pilot, and the sole passenger, were not injured. Visual meteorological conditions prevailed. A VFR flight plan was filed. The flight originated at the Edward G. Pitka Sr. Airport, Galena, Alaska, at 1403.

In the pilot/operator report (NTSB form 6120.1/2) submitted by the pilot, the pilot reported he was landing on runway 24 at the Indian Mountain Long Range Radar Station (LRRS) airport. The pilot said the wind conditions were 030 degrees at 20 knots, with gusts to 24 knots. During the landing flare, about 3 feet above the runway, the airplane encountered a gust of wind, or wind shear. The airplane stalled, and contacted the runway hard on the main landing gear.

After landing, the pilot reported he inspected the airplane for damage but did not notice any. The following day, September 11, 1998, the pilot began a preflight inspection of the airplane in preparation for a flight. He noticed the aft tie-down ring, and tail skid, located on the underside of the tail cone, was broken off the airplane. In addition, the airplane received damage to the aft empennage bulkhead, and adjacent fuselage structure.

The Indian Mountain LRRS, is located at 1,200 feet msl. Runway 24 is 4,100 feet long, and 120 feet wide. It has an uphill gradient of 7.1 percent.

## Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Private	<b>Age:</b>	30,Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	July 2, 1998
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	6530 hours (Total, all aircraft), 2399 hours (Total, this make and model), 5030 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 51 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N7380U
<b>Model/Series:</b>	207A 207A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	20700428
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	September 1, 1998 Annual	<b>Certified Max Gross Wt.:</b>	3800 lbs
<b>Time Since Last Inspection:</b>	25 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	11518 Hrs	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-520-F27B
<b>Registered Owner:</b>	ART WARBELOW	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>	WARBELOW'S AIR VENTURES INC.	<b>Operating Certificate(s) Held:</b>	Commuter air carrier (135), On-demand air taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	WVBA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<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>	20 knots / 24 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	30°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	GALENA (PAGA)	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	(PAIM)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	14:03 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	INDIAN MOUNTAIN LLRS PAIM	<b>Runway Surface Type:</b>	Gravel
<b>Airport Elevation:</b>	1220 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	24	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	4100 ft / 120 ft	<b>VFR Approach/Landing:</b>	Full stop

## 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>	66.049217,-154.239028(est)

## Administrative Information

**Investigator In Charge (IIC):** Erickson, Scott

**Additional Participating Persons:** HUGH KEITH (FAA); FAIRBANKS , AK

**Original Publish Date:** March 30, 2000

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=43983>

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