



# Aviation Investigation Final Report

<b>Location:</b>	38 SE BARROW, Alaska	<b>Accident Number:</b>	ANC82FA056
<b>Date &amp; Time:</b>	July 10, 1982, 18:20 Local	<b>Registration:</b>	N59572
<b>Aircraft:</b>	BELL 212	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 Minor, 3 None
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled		

## Analysis

WHILE EXECUTING A PRECAUTIONARY LANDING AFTER HEARING A SCREECHING SOUND THE PLT LOST DIRECTIONAL CONTROL & THE HELICOPTER LANDED WHILE SPINNING. EXAMINATION REVEALED THAT THE PRIMARY TAIL ROTOR DRIVESHAFT QUILL COUPLING HAD FAILED. THE 204-040-604-5 FEMALE COUPLING HAD EXPERIENCED HIGH TEMPERATURES DURING OPERATION. CADIUM PLATING HAD BEGUN TO MELT ON EXTERIOR SURFACES. VISUAL OVERHEAT INDICATOR STRIPES REQUIRED BY THE COMPONENT REPAIR & OVERHAUL MANUAL WERE NOT PRESENT ON THE FEMALE COUPLING. THE 204-040-603-9 MALE COUPLING HAD EXTENSIVE HEAT & MECHANICAL DAMAGE.

## Probable Cause and Findings

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

### Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: CRUISE - NORMAL

#### Findings

1. (C) ROTOR DRIVE SYSTEM, TAIL ROTOR DRIVE SHAFT - OVERTEMPERATURE
2. (C) ROTOR DRIVE SYSTEM, TAIL ROTOR DRIVE SHAFT - FAILURE, TOTAL

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Occurrence #2: FORCED LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

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Occurrence #3: HARD LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

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Occurrence #4: COMPLETE GEAR COLLAPSED  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

- 3. LANDING GEAR,SKID ASSEMBLY - OVERLOAD
- 4. LANDING GEAR,SKID ASSEMBLY - FAILURE,TOTAL

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor	<b>Age:</b>	57, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter; Instrument helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	May 4, 1982
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	20356 hours (Total, all aircraft), 1784 hours (Total, this make and model), 16856 hours (Pilot In Command, all aircraft), 96 hours (Last 90 days, all aircraft), 96 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N59572
<b>Model/Series:</b>	212 212	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	30621
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	7
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	11200 lbs
<b>Time Since Last Inspection:</b>	97 Hrs	<b>Engines:</b>	2 Turbo shaft
<b>Airframe Total Time:</b>	3467 Hrs	<b>Engine Manufacturer:</b>	P & W
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	PT-6-T-3
<b>Registered Owner:</b>	KENAI AIR ALASKA INC.	<b>Rated Power:</b>	900 Horsepower
<b>Operator:</b>	KENAI AIR ALASKA INC.	<b>Operating Certificate(s) Held:</b>	On-demand air taxi (135)
<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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	Overcast / 600 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	60°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	34°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	REMOTE LOCATION	<b>Type of Flight Plan Filed:</b>	Unknown
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:10 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	0 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	0 ft / 0 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	3 Minor, 2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 Minor, 3 None	<b>Latitude, Longitude:</b>	71.279235,-156.780044(est)

## Administrative Information

**Investigator In Charge (IIC):**

**Additional Participating Persons:**

**Original Publish Date:** July 10, 1983

**Last Revision Date:**

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

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=69650>

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