



# Aviation Investigation Final Report

<b>Location:</b>	WOOD RIVER, Alaska	<b>Accident Number:</b>	ANC91LA113
<b>Date &amp; Time:</b>	August 1, 1991, 20:30 Local	<b>Registration:</b>	N6848V
<b>Aircraft:</b>	MOONEY M-20F	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE PILOT-IN-COMMAND STATED THT DURING CRUISE FLIGHT THE PROPELLER STOPPED TURNING WITHIN SIX REVOLUTIONS WITHOUT WARNING. HE WAS FORCED TO LAND ON A SAND BAR ON THE WOOD RIVER. DURING THE LANDING THE NOSE GEAR AND RIGHT MAIN GEAR COLLAPSED. EXAMINATION OF THE ENGINE REVEALED THAT THE CONNECTING ROD CAP FROM THE NUMBER 4 CONNECTING ROD HAD FAILED APPROXIMATELY 1/2 INCH FROM THE MATING SURFACE, ABEAM THE HEAD OF THE CONNECTING ROD BOLT.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FAILURE OF THE NUMBER 4 CYLINDER CONNECTING ROD COP DUE TO FATIGUE. CONTRIBUTING TO THE ACCIDENT WAS THE ROUGH SURFACE OF THE FORCED LANDING AREA.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF  
Phase of Operation: CRUISE

### Findings

1. (C) ENGINE ASSEMBLY,CONNECTING ROD CAP - FATIGUE

Occurrence #2: FORCED LANDING

Phase of Operation: LANDING - ROLL

Findings

2. (F) TERRAIN CONDITION - ROUGH/UNEVEN

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	46, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim	<b>Last FAA Medical Exam:</b>	August 22, 1989
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1408 hours (Total, all aircraft), 400 hours (Total, this make and model), 1260 hours (Pilot In Command, all aircraft), 14 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	MOONEY	<b>Registration:</b>	N6848V
<b>Model/Series:</b>	M-20F M-20F	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	221
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	November 19, 1990 Annual	<b>Certified Max Gross Wt.:</b>	2740 lbs
<b>Time Since Last Inspection:</b>	2 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1461 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	IO-360AIA
<b>Registered Owner:</b>	GRIFFIN, HERBERT L., SR.	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>	GRIFFIN, HERBERT L., SR.	<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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 5000 ft AGL	<b>Visibility</b>	60 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	16°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	FAIRBANKS , AK (FAI)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	19:50 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

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

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 None	<b>Latitude, Longitude:</b>	64.769226,-147.329025(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Kobelnyk, George
<b>Additional Participating Persons:</b>	STEVE KETZER; FAIRBANKS , AK
<b>Original Publish Date:</b>	April 27, 1993
<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=5591">https://data.ntsb.gov/Docket?ProjectID=5591</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](#).