Aviation Investigation Final Report

Location:	YAKUTAT, Alaska	**Accident Number:**	ANC00LA105
Date & Time:	August 16, 2000, 17:00 Local	**Registration:**	N185M
Aircraft:	Cessna 185	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	3 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Sightseeing		

Analysis

The pilot said that during landing on firm sand, the right landing gear leg separated at the wheel attachment upper bolts. The remaining gear leg dug into the sand, and the airplane spun around. The airplane sustained substantial damage to both main landing gear attachments, and both wings. The NTSB materials laboratory found areas of fatigue at both upper bolt holes. Corrosion pitting was found at one of the fatigue sites. The airplane had been operated on skis in the past.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The total fatigue failure of the right main landing gear leg.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
1. (C) LANDING GEAR,MAIN GEAR STRUT - FAILURE,TOTAL
2. (C) LANDING GEAR,MAIN GEAR STRUT - FATIGUE

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

On August 16, 2000, about 1700 Alaska daylight time, a tundra tire equipped Cessna 185 airplane, N185M, sustained substantial damage during landing at an off airport landing site on the Alsek River, Alaska, at 59 degrees, 04 minutes north latitude, 138 degrees, 19 minutes west longitude. The commercial pilot and the two passengers were not injured. The flight was conducted under 14 CFR Part 135, by Mountain Flying Service, Inc., of Haines, Alaska, as an on demand sightseeing flight. The flight originated from Haines, Alaska, about 1500, with a planned landing at the accident site. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed.

The pilot told the NTSB investigator-in-charge during a telephone interview on August 21, that during the landing on firm sand, the right landing gear leg separated at the wheel attachment upper bolts. The remaining gear leg dug into the sand, and the airplane spun around. The airplane sustained substantial damage to both main landing gear attachments, and both wings.

The fractured lower leg was examined at the NTSB materials laboratory on September 12, 2000. Areas of fatigue were found at both upper bolt holes. Corrosion pitting was found at one of the fatigue sites. Pink, non-destructive inspection, dye penetrant residue was found inside the bolt holes. A review of the airplane's logbooks revealed that the airplane had been operated on skis in the past.

Pilot Information

Certificate:	Commercial	**Age:**	45,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	February 8, 2000
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	5000 hours (Total, all aircraft), 4500 hours (Total, this make and model), 300 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N185M
Model/Series:	185 185	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	18504264
Landing Gear Type:	Tailwheel	**Seats:**	5
Date/Type of Last Inspection:	August 3, 2000 100 hour	**Certified Max Gross Wt.:**	3350 lbs
Time Since Last Inspection:	50 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	6500 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-520
Registered Owner:	PAUL SWANSTROM	**Rated Power:**	300 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:	MOUNTAIN FLYING SERVICE, INC.	**Operator Designator Code:**	OUFA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 8000 ft AGL	**Visibility**	40 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	270°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	HAINES , AK (HNS)	**Type of Flight Plan Filed:**	VFR
Destination:		**Type of Clearance:**	None
Departure Time:	15:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Full stop;Valley/terrain following

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 None	**Latitude, Longitude:**	59.509796,-139.709854(est)

Administrative Information

Investigator In Charge (IIC):	Thomas, Matthew
Additional Participating Persons:	CHARLES WISNER(FAA FSDO); JUNEAU , AK
Original Publish Date:	July 2, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=50984