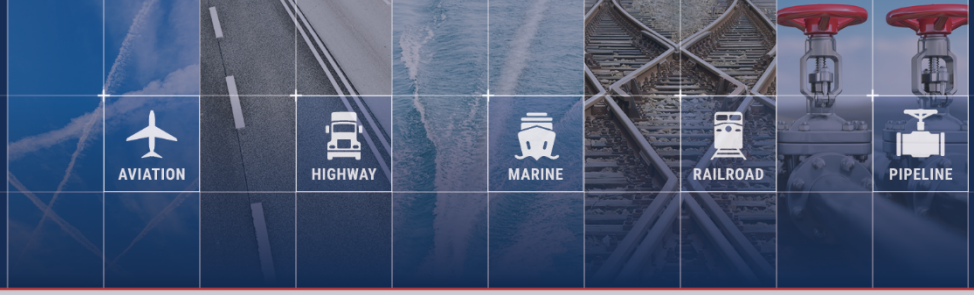

Aviation Investigation Final Report

Location:	Denali Park, Alaska	**Accident Number:**	ANC12LA106
Date & Time:	September 13, 2012, 14:00 Local	**Registration:**	N4786Q
Aircraft:	Cessna A185F	**Aircraft Damage:**	Substantial
Defining Event:	Miscellaneous/other	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

The pilot was returning from a weather observation flight when the right wheel/ski actuator connecting bolt broke and the ski deflected downward about 90 degrees. The pilot maintained control of the airplane; however, during the descent to the airport he realized that he was descending faster than he anticipated. He increased the airplane's pitch angle in an effort to climb, but the airplane contacted a power line. The pilot continued to the destination airport and landed after two low passes. The airplane sustained substantial damage to the left wing. The pilot stated that he was aware of the power line, but was so focused on the ski deflection and maintaining control of the airplane that he did not even realize that the airplane had struck it. The failure of the wheel/ski actuator connecting bolt was likely due to the repetitive forces to the skis that typically occur in normal ski 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 clearance from an electric transmission line during the approach to land because he was distracted by the airplane's broken and deflected landing ski. Contributing to the accident was the in-flight failure of the right ski connecting bolt and the subsequent ski deflection.

Findings

Aircraft	Wheel/ski/float - Failure
Personnel issues	Incorrect action performance - Pilot
Environmental issues	Wire - Contributed to outcome

Factual Information

History of Flight

Enroute	Sys/Comp malf/fail (non-power)
Approach	Collision with terr/obj (non-CFIT)
Approach	Miscellaneous/other (Defining event)

On September 13, 2012, about 1400 Alaska daylight time, a wheel/ski equipped Cessna A185F airplane, N4786Q, sustained substantial damage following an in-flight collision with an electrical transmission line near Denali Park, Alaska. The certificated commercial pilot was not injured. The airplane was owned by the pilot, and operated by Denali Air, Denali Park, as a visual flight rules (VFR) weather observation flight under 14 Code of Federal Regulations Part 91 when the accident occurred. Visual meteorological conditions prevailed, and a company VFR flight plan was in effect. The flight originated from the Denali Park Airstrip about 1340.

In a written statement to the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), the pilot stated that the purpose of the flight was to determine if the weather was suitable enough to run flightseeing operations to the glacier east of the Denali Park Airstrip. After determining the weather conditions over the glacier, he turned around for the return trip to the Denali Park Airstrip. He stated that it is normal procedure to lower the skis while flying over snow, in the event that a landing needed to be made. He said that when he lowered the skis, there was an abnormal sound, but everything appeared to be operating normally. When he attempted to raise the skis again, in preparation for landing at the Denali Park Airstrip, he noticed that the right ski did not sound or feel normal, and he could hear “a light popping sound,” accompanied by oscillations in pitch and yaw. He stated that, while he was attempting to troubleshoot the ski problem, he had descended below his intended flight path, and was getting close to the terrain. He said that as he raised the airplane’s nose to climb, a more violent popping and banging sound occurred, accompanied with a loss in airspeed, strong vibration, and a severe yaw to the right.

The pilot said that he was able to maintain control of the airplane, and made two passes over the runway at the Denali Park Airstrip. During the passes, he was able to determine that the right ski had deflected to a vertical position. Further attempts to realign the ski were unsuccessful, and the pilot elected to land the airplane with the ski in the vertical position. During the landing, the right ski folded under the right main landing gear wheel.

On September 14, a representative of the Golden Valley Electric Association, Fairbanks, Alaska, delivered a piece of severed transmission tower static cable, along with a piece of red painted metal that resembled an airplane propeller spinner, to the Federal Aviation Administration (FAA) Fairbanks Flight Standards District Office (FSDO). He stated that approximately 1400 on September 13, a power outage occurred when the severed static cable contacted the main

transmission lines of the Alaska Intertie.

In a telephone conversation with the NTSB IIC on September 14, the pilot stated that he was aware of the power line, but he was not aware that the airplane had made contact with it.

On September 15, two aviation safety inspectors from the FAA's Anchorage FSDO traveled to the operator's hangar, and documented the damage to the airplane. The left wing sustained substantial damage to the leading edge and aileron. Approximately 7 inches of one propeller blade was missing, and there were multiple scratches and gouges in both propeller blades. The right ski had been removed from the airplane to facilitate moving it from the runway, but examination of the ski revealed the bolt that connects the ski to the ski actuator was broken. There were multiple scratches and wire abrasion marks on the airplane. The left wing had a large gash near the center of the wing, consistent with contact with the power line.

Pilot Information

Certificate:	Commercial	**Age:**	38,Male
Airplane Rating(s):	Single-engine land; Multi-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 Without waivers/limitations	**Last FAA Medical Exam:**	April 28, 2012
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	May 15, 2012
Flight Time:	5332 hours (Total, all aircraft), 264 hours (Total, this make and model), 55 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N4786Q
Model/Series:	A185F	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	18503556
Landing Gear Type:	Ski/wheel	**Seats:**	6
Date/Type of Last Inspection:	August 4, 2012 100 hour	**Certified Max Gross Wt.:**	
Time Since Last Inspection:	11 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5024 Hrs at time of accident	**Engine Manufacturer:**	CONT MOTOR
ELT:	Installed, not activated	**Engine Model/Series:**	IO 520 SERIES
Registered Owner:	MCGREGOR DANIEL A	**Rated Power:**	285 Horsepower
Operator:	Denali Air	**Operating Certificate(s) Held:**	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PAIN	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:		**Direction from Accident Site:**	300°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 7000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Denali Park, AK (AK06)	**Type of Flight Plan Filed:**	Company VFR
Destination:	Denali Park, AK (AK06)	**Type of Clearance:**	None
Departure Time:	13:40 Local	**Type of Airspace:**	

Airport Information

Airport:	Denali Park Strip AK06	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Traffic pattern;Valley/terrain following

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	
Total Injuries:	1 None	**Latitude, Longitude:**	63.645278,-148.798049(est)

Administrative Information

Investigator In Charge (IIC):	Shaver, Christopher
Additional Participating Persons:	Lisa Asplin; FAA Anchorage FSDO; Anchorage, AK Charles Strange; FAA Anchorage FSDO; Anchorage, AK
Original Publish Date:	September 12, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=85068