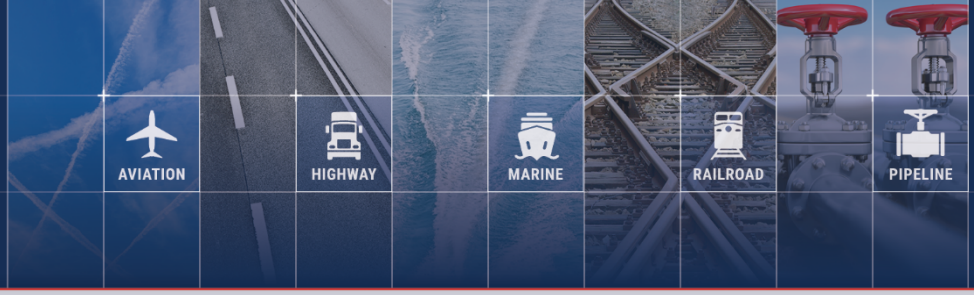

Aviation Investigation Final Report

Location:	Ely, Minnesota	**Accident Number:**	CEN13LA374
Date & Time:	June 25, 2013, 13:00 Local	**Registration:**	N715SB
Aircraft:	Aviat Aircraft, Inc. A-1B	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control on ground	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the accident occurred when he was making water landings in the amphibious airplane. He stated that he noted no anomalies during his first landing. He said the lake surface had “light ripples,” and the wind speed was less than 5 knots. The pilot stated that his second landing approach and touchdown were also initially uneventful; however, shortly after the airplane touched down, it began to roll and yaw toward the left, and the left wing contacted the water. The airplane came to rest partially submerged, nose-low, in the lake. An examination of the recovered wreckage revealed substantial damage to several float struts and spreader bars; however, all examined component damage was consistent with overstress, with no preexisting material defects observed. Because the damage to the amphibious float components occurred during the accident, they likely did not contribute to the initial loss of control. Therefore, given the pilot's report of light wind, the pilot should have been able to maintain airplane control throughout the water landing.

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 control of the amphibious airplane during the water landing.

Findings

Aircraft	Directional control - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Aircraft	(general) - Capability exceeded

Factual Information

History of Flight

Landing	Loss of control on ground (Defining event)
Landing	Dragged wing/rotor/float/other
Landing	Collision with terr/obj (non-CFIT)

On June 25, 2013, at 1300 central daylight time, an Aviat Aircraft model A-1B amphibious airplane, N715SB, was substantially damaged during a water landing on Shagawa Lake, near Ely, Minnesota. The airline transport pilot and his passenger were not injured. The airplane was registered to and operated by a private individual, under the provisions of 14 Code of Federal Regulations Part 91, without a flight plan. Day visual meteorological conditions prevailed for the pleasure flight that departed Ely Municipal Airport (KELO), near Ely, Minnesota, about 1245.

The pilot reported that after a short local area flight he began to make water takeoff-and-landings on Shagawa Lake toward the southeast. The pilot reported that his first landing was uneventful and that there were no anomalies with the airplane. He described the lake surface condition as having “light ripples” with a wind speed of less than 5 knots. He stated that his second landing approach and touchdown were again uneventful; however, shortly after the touchdown the airplane began to roll and yaw toward the left until the left wing made contact with the water. The airplane ultimately came to rest partially submerged nose-low in the lake. The fuselage, wings, and amphibious floats were damaged during the accident sequence.

An examination of the recovered wreckage was completed by Federal Aviation Administration (FAA) inspectors and an aerospace engineer employed by the amphibious float manufacturer. Their examination revealed substantial damage to several float struts and spreader bars. The left rear float strut attachment fitting with fractured portions of lower airframe longeron tube and the inboard sections of the left and right rear spreader bar mounting tubes were submitted to the National Transportation Safety Board (NTSB) Materials Laboratory for additional examination. The examined components exhibited fracture features that were consistent with overstress. Additionally, no preexisting material defects were noted during the NTSB laboratory examination.

The nearest aviation weather reporting station was located at Ely Municipal Airport (KELO), Ely, Minnesota, about 6.25 miles south of the accident site. At 1252, the KELO automated surface observing system reported: wind from 200 degrees at 4 knots, visibility 10 miles, sky clear, temperature 28 degrees Celsius, dew point 12 degrees Celsius, and an altimeter setting of 29.82 inches of mercury.

Pilot Information

Certificate:	Airline transport; Flight engineer	**Age:**	62,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Front
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 1 Without waivers/limitations	**Last FAA Medical Exam:**	March 1, 2013
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	May 5, 2013
Flight Time:	(Estimated) 17000 hours (Total, all aircraft), 40 hours (Total, this make and model), 15000 hours (Pilot In Command, all aircraft), 200 hours (Last 90 days, all aircraft), 69 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aviat Aircraft, Inc.	**Registration:**	N715SB
Model/Series:	A-1B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2051
Landing Gear Type:	Amphibian	**Seats:**	2
Date/Type of Last Inspection:	May 16, 2013 Annual	**Certified Max Gross Wt.:**	2000 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	688 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	C126 installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-360-A1P
Registered Owner:	On file	**Rated Power:**	180 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KELO,1456 ft msl	**Distance from Accident Site:**	6 Nautical Miles
Observation Time:	12:52 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.81 inches Hg	**Temperature/Dew Point:**	28°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Ely, MN (KELO)	**Type of Flight Plan Filed:**	None
Destination:	Ely, MN (KELO)	**Type of Clearance:**	None
Departure Time:	12:45 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Shagawa Lake	**Runway Surface Type:**	Water
Airport Elevation:		**Runway Surface Condition:**	Water-calm
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	47.913887,-91.877777(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Kevin Morris; Federal Aviation Administration - Minneapolis FSDO; Minneapolis, MN David Nelson; Federal Aviation Administration - Minneapolis FSDO; Minneapolis, MN Ryan Nordell; Wipaire Inc.; South St. Paul, MN
Original Publish Date:	December 2, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=87311