



Aviation Investigation Final Report

Location:	Juneau, Alaska	Accident Number:	ANC02LA076
Date & Time:	July 12, 2002, 08:40 Local	Registration:	N93AK
Aircraft:	de Havilland DHC-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The pilot reported that he was repositioning the floatplane from the anchorage to the passenger docks. The pilot landed the airplane hard with a quartering tailwind, and inadvertently water looped the airplane. During the hard landing and water loop, the right float separated from the airplane. The airplane settled into the water, nosed over, and submerged, damaging the right wing.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper flare resulting in a hard landing. Factors contributing to the accident were the quartering tailwind, and the inadvertent water loop.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

- Findings
1. (F) WEATHER CONDITION - TAILWIND
 2. (C) FLARE - IMPROPER - PILOT IN COMMAND
 3. LANDING GEAR,FLOAT ASSEMBLY - SEPARATION
 4. (F) WATER LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND
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Occurrence #2: NOSE OVER
Phase of Operation: LANDING - ROLL

Findings

5. TERRAIN CONDITION - WATER

Factual Information

On July 12, 2002, about 0840 Alaska daylight time, a float-equipped de Havilland DHC-2 airplane, N93AK, sustained substantial damage during a hard landing when the right landing gear float separated from the airplane, and the airplane nosed over at the Juneau Harbor Seaplane base, Juneau, Alaska. The airplane was being operated by Alaska Coastal Airlines, dba Wings Airways, of Juneau, as a visual flight rules (VFR) positioning flight under Title 14, CFR Part 91, when the accident occurred. The solo commercial pilot was not injured. Visual meteorological conditions prevailed, and company VFR flight following procedures were in effect. The airplane was being repositioned from its anchorage in Juneau to the downtown passenger docks.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on July 12, the Federal Aviation Administration (FAA) aviation safety inspector (ASI) who was at the accident site, said according to numerous witnesses, the airplane landed hard, and bounced several times, appearing to skid across the surface of the water sideways. She said during the hard landing the accident airplane's right float partially separated from the airplane, and the airplane started to sink. She said the airplane eventually nosed over, and submerged suspended from the surface of the water by the left float.

In a written statement to the FAA dated July 12, the pilot said he made an approach and landed toward the east. He said as he approached the surface of the water, he corrected for a slight left crosswind which he estimated to be five knots. He said the airplane touched down with the left float first, and he retarded the throttle. He said when the right float touched down it dug in, and the airplane bounced once or twice. He said the airplane came to rest with its right side low in the water, and he climbed out onto the left float where he was picked up by a boat. The airplane then submerged.

The right wing of the airplane sustained substantial damage during the accident.

At the time of the accident, the Juneau weather station was reporting winds from 260 degrees at 6 knots. The visibility was 10 statute miles, and the temperature and dewpoint were 55 and 52 degrees F, respectively. The sky condition was reported as few clouds at 3500 feet msl, and the altimeter setting was 30.17 inches of mercury.

Pilot Information

Certificate:	Commercial	Age:	58, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; 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 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	March 6, 2002
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 7, 2002
Flight Time:	5100 hours (Total, all aircraft), 150 hours (Total, this make and model), 5010 hours (Pilot In Command, all aircraft), 185 hours (Last 90 days, all aircraft), 95 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	de Havilland	Registration:	N93AK
Model/Series:	DHC-2	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	809
Landing Gear Type:	Float	Seats:	7
Date/Type of Last Inspection:	June 20, 2002 Annual	Certified Max Gross Wt.:	5090 lbs
Time Since Last Inspection:	57 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	26864 Hrs as of last inspection	Engine Manufacturer:	Pratt & Whitney
ELT:	Installed, not activated	Engine Model/Series:	R-985
Registered Owner:	Alaska Juneau Aeronautics, Inc.	Rated Power:	450 Horsepower
Operator:	Alaska Coastal Airlines	Operating Certificate(s) Held:	Commuter air carrier (135), On-demand air taxi (135)
Operator Does Business As:	Wings of Alaska	Operator Designator Code:	AJAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	PAJN,100 ft msl	Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Few / 3500 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.17 inches Hg	Temperature/Dew Point:	13°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Juneau, AK (5Z1)	Type of Flight Plan Filed:	Company VFR
Destination:	Juneau, AK	Type of Clearance:	VFR
Departure Time:	08:40 Local	Type of Airspace:	Class G

Airport Information

Airport:	Juneau Harbor Seaplane 5Z1	Runway Surface Type:	Water
Airport Elevation:		Runway Surface Condition:	Water-choppy
Runway Used:	NW	IFR Approach:	None
Runway Length/Width:	10000 ft / 1000 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	58.301387,-134.420562

Administrative Information

Investigator In Charge (IIC):	Lewis, Lawrence
Additional Participating Persons:	Kieran K O'Farrell; FAA Juneau FSDO-05; Juneau, AK
Original Publish Date:	April 29, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=55233

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](#).