



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	KETCHIKAN, AK	<b>Accident Number:</b>	ANC99LA107A
<b>Date &amp; Time:</b>	08/07/1999, 0930 AKD	<b>Registration:</b>	N288SA
<b>Aircraft:</b>	de Havilland DHC-6-300	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	17 None

**Flight Conducted Under:** Part 121: Air Carrier - Non-scheduled - Sightseeing

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## Analysis

A pair of float equipped, twin engine airplanes were each parked parallel to a dock. The airplanes were separated by about eight feet, one in front of the other. Both airplanes, operated by the same company, were preparing to depart on sightseeing flights. The crew of first airplane, N288SA, was beginning a passenger briefing. The passengers were on board the airplane, but the engines had not been started. The crew of the second airplane, N224SA, had completed a briefing to their passengers, and had started the engines. N224SA was tethered to the dock by ropes attached to the floats at the forward and aft end of the airplane. Each rope was tended by a company dock handler. Due to a slight change in the manner the passengers arrived from a cruise ship, the passengers had not received a briefing booklet before boarding the airplane. A company representative approached the forward dock handler to hand the briefing booklets to the airplane crew. The aft dock handler observed this activity and mistook its meaning as a 'thumbs up' signal. He released the docking rope, allowing N224SA to begin moving forward under idle power. The and nose of N224SA collided with the tail of N288SA. N288SA received damage to the rudder and trim tab assembly. N224SA received minor damage to the left pitot tube, and the left side of the nose.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A failure of ground handling personnel to verify a release procedure/directive, and removal of a second airplane's tiedown, and subsequent collision from a second airplane.

## Findings

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Occurrence #1: COLLISION BETWEEN AIRCRAFT (OTHER THAN MIDAIR)  
Phase of Operation: STANDING - ENGINE(S) NOT OPERATING

### Findings

1. OBJECT - AIRCRAFT PARKED/STANDING
2. (C) PROCEDURES/DIRECTIVES - NOT VERIFIED - GROUND PERSONNEL
3. (C) TIE DOWN - REMOVED - GROUND PERSONNEL

## Factual Information

On August 7, 1999, about 0930 Alaska daylight time, a float equipped deHavilland DHC-6-300 airplane, N288SA, sustained substantial damage while docked at Ketchikan, Alaska, when it was struck by another float equipped deHavilland DHC-6-300 airplane, N224SA. Both airplanes were being operated as visual flight rules (VFR) local area sightseeing flights under Title 14, CFR Part 121, when the accident occurred. Both airplanes were operated by Seaborne Aviation Inc., Ketchikan. The captain, the first officer, and the 15 passengers on N288SA, were not injured. The captain, the first officer, and the 15 passengers on N224SA, were not injured. Visual meteorological conditions prevailed. VFR company flight following procedures were in effect.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on August 9, 1999, the Director of Operations for the company reported the crew of N288SA was beginning a passenger briefing to passengers before departing on a sightseeing flight. The passengers were on board the airplane, but the engines had not been started. N224SA, was also tied to the Ketchikan dock, parked behind N288SA. Each airplane was separated by about eight feet.

The director of operations said the crew of N224SA had completed their briefing to the passengers on board the airplane, and had started the engines. The airplane was tethered to the dock by ropes attached to the floats at the forward and aft end of the airplane. Each rope was tended by a company dock handler. Due to a slight change in the manner the passengers arrived from a cruise ship, the passengers had not received a briefing booklet before boarding N224SA. A company representative approached the forward dock handler to hand the briefing booklets to the airplane crew. The aft dock handler observed this activity and mistook its meaning as a "thumbs up" signal. He released the docking rope, allowing N224SA to begin moving forward under idle power. The nose of N224SA collided with the tail of N288SA.

N288SA received damage to the rudder and trim tab assembly. N224SA received minor damage to the left pitot tube, and the left side of the nose.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor	<b>Age:</b>	44, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Multi-engine Sea; Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last Medical Exam:</b>	02/18/1999
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	14200 hours (Total, all aircraft), 2400 hours (Total, this make and model), 12580 hours (Pilot In Command, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	de Havilland	<b>Registration:</b>	N288SA
<b>Model/Series:</b>	DHC-6-300 DHC-6-300	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	389
<b>Landing Gear Type:</b>	Float	<b>Seats:</b>	19
<b>Date/Type of Last Inspection:</b>	07/20/1999, AAIP	<b>Certified Max Gross Wt.:</b>	125000 lbs
<b>Time Since Last Inspection:</b>	61 Hours	<b>Engines:</b>	2 Turbo Prop
<b>Airframe Total Time:</b>	33938 Hours	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	PT6A-27
<b>Registered Owner:</b>	TWIN OTTER INTERNATIONAL, LTD	<b>Rated Power:</b>	620 hp
<b>Operator:</b>	SEABORNE AVIATION INC.	<b>Air Carrier Operating Certificate:</b>	Flag carrier (121); Supplemental
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	S9BA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PAK, 88 ft msl	Observation Time:	0853 ADT
Distance from Accident Site:	1 Nautical Miles	Direction from Accident Site:	210°
Lowest Cloud Condition:	Clear / 0 ft agl	Temperature/Dew Point:	18° C / 12° C
Lowest Ceiling:	None / 0 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	10 knots/ 35 knots, 150°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	Class E; FAR 93

## Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	15 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	17 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	SCOTT R ERICKSON	Adopted Date:	12/05/2000
Additional Participating Persons:	JAMES MCCOY (FAA); JUNEAU, AK		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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