



# Aviation Investigation Final Report

<b>Location:</b>	Ketchikan, Alaska	<b>Accident Number:</b>	CEN19MA141
<b>Date &amp; Time:</b>	May 13, 2019, 12:21 Local	<b>Registration:</b>	N952DB (A1); N959PA (A2)
<b>Aircraft:</b>	De Havilland DHC-2 (A1); De Havilland DHC-3 (A2)	<b>Aircraft Damage:</b>	Destroyed (A1); Substantial (A2)
<b>Defining Event:</b>	Midair collision	<b>Injuries:</b>	5 Fatal (A1); 1 Fatal, 9 Serious, 1 Minor (A2)
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled - Sightseeing (A1); Part 135: Air taxi & commuter - Non-scheduled - Sightseeing (A2)		

## Analysis

On May 13, 2019, about 1221 Alaska daylight time, a float-equipped de Havilland DHC 2 (Beaver) airplane, N952DB, and a float-equipped de Havilland DHC-3 (Otter) airplane, N959PA, collided in midair about 8 miles northeast of Ketchikan, Alaska. The DHC-2 pilot and four passengers sustained fatal injuries. The DHC-3 pilot sustained minor injuries, nine passengers sustained serious injuries, and one passenger sustained fatal injuries. The DHC-2 was destroyed, and the DHC-3 sustained substantial damage. The DHC-2 was registered to and operated by Mountain Air Service LLC, Ketchikan, Alaska, under the provisions of Title 14 Code of Federal Regulations (CFR) Part 135 as an on-demand sightseeing flight. The DHC-3 was registered to Pantechonicon Aviation LTD, Minden, Nevada, and operated by Venture Travel, LLC, dba Taquan Air, Ketchikan, Alaska, under the provisions of Part 135 as an on-demand sightseeing flight. Visual meteorological conditions prevailed in the area at the time of the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The National Transportation Safety Board determines that the probable cause of this accident was the inherent limitations of the see-and-avoid concept, which prevented the two pilots from seeing the other airplane before the collision, and the absence of visual and aural alerts from both airplanes' traffic display systems, while operating in a geographic area with a high

concentration of air tour activity. Contributing to the accident were (1) the Federal Aviation Administration’s provision of new transceivers that lacked alerting capability to Capstone Program operators without adequately mitigating the increased risk associated with the consequent loss of the previously available alerting capability and (2) the absence of a requirement for airborne traffic advisory systems with aural alerting among operators who carry passengers for hire.

## Findings

<b>Personnel issues (A1)</b>	Visual function - Pilot
<b>Personnel issues (A1)</b>	Visual function - Pilot of other aircraft
<b>Aircraft (A1)</b>	Central warning - Not specified
<b>Organizational issues (A1)</b>	Equip certification/testing - FAA/Regulator
<b>Aircraft (A1)</b>	(general) - Design
<b>Organizational issues (A1)</b>	Adequacy of policy/proc - FAA/Regulator
<b>Environmental issues (A1)</b>	Equipment/operational - Effect on operation
<b>Personnel issues (A2)</b>	Visual function - Pilot
<b>Personnel issues (A2)</b>	Visual function - Pilot of other aircraft
<b>Aircraft (A2)</b>	Central warning - Not specified
<b>Organizational issues (A2)</b>	Equip certification/testing - FAA/Regulator
<b>Aircraft (A2)</b>	(general) - Design
<b>Organizational issues (A2)</b>	Adequacy of policy/proc - FAA/Regulator
<b>Environmental issues (A2)</b>	Equipment/operational - Effect on operation
<b>Aircraft (A2)</b>	(general) - Incorrect use/operation
<b>Organizational issues (A2)</b>	Adequacy of policy/proc - Operator
<b>Organizational issues (A2)</b>	(general) - FAA/Regulator

## Factual Information

### History of Flight

<b>Maneuvering (A1)</b>	Midair collision (Defining event)
<b>Maneuvering (A2)</b>	Midair collision

### Pilot Information (A1)

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	46, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	April 29, 2019
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	May 2, 2019
<b>Flight Time:</b>	(Estimated) 11000 hours (Total, all aircraft)		

### Pilot Information (A2)

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor	<b>Age:</b>	60, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	November 28, 2018
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	April 25, 2019
<b>Flight Time:</b>	(Estimated) 25000 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information (A1)

<b>Aircraft Make:</b>	De Havilland	<b>Registration:</b>	N952DB
<b>Model/Series:</b>	DHC-2	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1952	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	237
<b>Landing Gear Type:</b>	Float	<b>Seats:</b>	7
<b>Date/Type of Last Inspection:</b>	April 16, 2019 Annual	<b>Certified Max Gross Wt.:</b>	5100 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	16452 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Pratt & Whitney
<b>ELT:</b>	C126 installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	R985-AN-14B
<b>Registered Owner:</b>	Mountain Air Service LLC	<b>Rated Power:</b>	450 Horsepower
<b>Operator:</b>	Mountain Air Service LLC	<b>Operating Certificate(s) Held:</b>	On-demand air taxi (135)

## Aircraft and Owner/Operator Information (A2)

<b>Aircraft Make:</b>	De Havilland	<b>Registration:</b>	N959PA
<b>Model/Series:</b>	DHC-3	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1956	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	159
<b>Landing Gear Type:</b>	Float	<b>Seats:</b>	11
<b>Date/Type of Last Inspection:</b>	April 30, 2019 AAIP	<b>Certified Max Gross Wt.:</b>	8000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo prop
<b>Airframe Total Time:</b>	30296.7 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Pratt & Whitney Canada
<b>ELT:</b>	C126 installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	PT6A-34
<b>Registered Owner:</b>	Pantechnicon Aviation Ltd	<b>Rated Power:</b>	750 Horsepower
<b>Operator:</b>	Venture Travel, LLC	<b>Operating Certificate(s) Held:</b>	On-demand air taxi (135)
<b>Operator Does Business As:</b>	Taquan Air	<b>Operator Designator Code:</b>	TK0A

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	PAKT,92 ft msl	<b>Distance from Accident Site:</b>	8 Nautical Miles
<b>Observation Time:</b>	11:53 Local	<b>Direction from Accident Site:</b>	225°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	11 knots / 17 knots	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	130°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.9 inches Hg	<b>Temperature/Dew Point:</b>	16°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Rudyard Bay, AK (A2)	<b>Type of Flight Plan Filed:</b>	VFR (A1); Company VFR (A2)
<b>Destination:</b>	Ketchikan, AK (5KE) (A1); Ketchikan, AK (5KE) (A2)	<b>Type of Clearance:</b>	None (A1); None (A2)
<b>Departure Time:</b>	12:03 Local (A2)	<b>Type of Airspace:</b>	Class G (A1); Class G (A2)

## Wreckage and Impact Information (A1)

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	4 Fatal	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	5 Fatal	<b>Latitude, Longitude:</b>	55.425556,-131.505(est)

## Wreckage and Impact Information (A2)

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Fatal, 9 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal, 9 Serious, 1 Minor	<b>Latitude, Longitude:</b>	55.425556,-131.505(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Sauer, Aaron
<b>Additional Participating Persons:</b>	Todd Gentry; Federal Aviation Administration; Washington, DC Kevin Roof; Venture Travel, LLC; Ketchikan, AK Ricardo Price; Genesys Aerosystems; TX James Johnston; FreeFlight Systems; Irving, TX
<b>Original Publish Date:</b>	May 14, 2021
<b>Last Revision Date:</b>	July 3, 2024
<b>Investigation Class:</b>	<a href="#">Class 1</a>
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=99423">https://data.nts.gov/Docket?ProjectID=99423</a>

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](#).