



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Ketchikan, Alaska	Accident Number:	CEN19MA141
Date & Time:	May 13, 2019, 12:21 Local	Registration:	N952DB (A1); N959PA (A2)
Aircraft:	De Havilland DHC-2 (A1); De Havilland DHC-3 (A2)	Aircraft Damage:	Destroyed (A1); Substantial (A2)
Defining Event:	Midair collision	Injuries:	5 Fatal (A1); 1 Fatal, 9 Serious, 1 Minor (A2)
Flight Conducted Under:	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 Pantechnicon 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

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

Factual Information

History of Flight

Maneuvering (A1)	Midair collision (Defining event)
Maneuvering (A2)	Midair collision

Pilot Information (A1)

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

Pilot Information (A2)

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

Aircraft and Owner/Operator Information (A1)

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

Aircraft and Owner/Operator Information (A2)

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

Meteorological Information and Flight Plan

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

Wreckage and Impact Information (A1)

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

Wreckage and Impact Information (A2)

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

Administrative Information

Investigator In Charge (IIC):	Sauer, Aaron
Additional Participating Persons:	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
Original Publish Date:	May 14, 2021
Last Revision Date:	July 3, 2024
Investigation Class:	Class 1
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=99423

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](#).