



# Aviation Investigation Final Report

<b>Location:</b>	Boise, Idaho	<b>Accident Number:</b>	DCA20CA010
<b>Date &amp; Time:</b>	October 29, 2019, 14:33 Local	<b>Registration:</b>	N402QX
<b>Aircraft:</b>	De Havilland DHC8	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Birdstrike	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 121: Air carrier - Scheduled		

## Analysis

On October 29, 2019 at 1433 mountain daylight time, Horizon Air as flight 2337, a Bombardier De Havilland DHC8, N402QX, struck a bird during climb out from Boise Airport (KBOI), Boise, Idaho. After the collision, the flight crew saw visual evidence of the bird remains on the left wing, determined there were no indications of control problems, and decided to continue to Seattle/Tacoma International Airport (KSEA), Seattle, Washington, where the flight landed with no further incident. Postflight inspection of the airplane revealed that the the bird impact had partially severed the left wing leading edge composite structure and cracked the front spar web. The flight was operating was operating under 14 CFR Part 121 and there were no injuries to the 80 passengers and crew onboard.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: a bird strike during climb out.

## Findings

<b>Environmental issues</b>	Animal(s)/bird(s) - Effect on equipment
-----------------------------	---

## Factual Information

### History of Flight

Initial climb	Birdstrike (Defining event)
---------------	-----------------------------

### Pilot Information

Certificate:	Airline transport; Commercial	Age:	41
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Glider	Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	May 16, 2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	October 12, 2019
Flight Time:	9628 hours (Total, all aircraft), 994 hours (Total, this make and model), 4474 hours (Pilot In Command, all aircraft), 57 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

### Co-pilot Information

Certificate:	Airline transport; Commercial	Age:	28
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	November 12, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 25, 2019
Flight Time:	1813 hours (Total, all aircraft), 575 hours (Total, this make and model), 441 hours (Pilot In Command, all aircraft), 134 hours (Last 90 days, all aircraft), 80 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	De Havilland	<b>Registration:</b>	N402QX
<b>Model/Series:</b>	DHC8 402	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2001	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Transport	<b>Serial Number:</b>	4032
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	82
<b>Date/Type of Last Inspection:</b>	June 12, 2019	<b>Certified Max Gross Wt.:</b>	65400 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2
<b>Airframe Total Time:</b>	43991.63 Hrs at time of accident	<b>Engine Manufacturer:</b>	Pratt & Whitney Canada
<b>ELT:</b>	C126 installed, not activated	<b>Engine Model/Series:</b>	PW150A
<b>Registered Owner:</b>	Bcc Equipment Leasing Corp	<b>Rated Power:</b>	
<b>Operator:</b>	Horizon Air Industries Inc.	<b>Operating Certificate(s) Held:</b>	Flag carrier (121), Supplemental

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KBOI	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	19:53 Local	<b>Direction from Accident Site:</b>	260°
<b>Lowest Cloud Condition:</b>	Scattered / 4100 ft AGL	<b>Visibility</b>	
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.34 inches Hg	<b>Temperature/Dew Point:</b>	
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Boise, ID (KBOI)	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	Seattle, WA (KSEA)	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	13:30 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	Boise Airport KBOI	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	2871 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	43.5,-116.300003(est)

## Administrative Information

**Investigator In Charge (IIC):** English, William

**Additional Participating Persons:**

**Original Publish Date:** April 22, 2020

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:** This accident report documents the factual circumstances of this accident as described to the NTSB.

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=100507>

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](#).