



# Aviation Investigation Final Report

<b>Location:</b>	Englewood, Colorado	<b>Accident Number:</b>	CEN23LA394
<b>Date &amp; Time:</b>	September 2, 2023, 05:54 Local	<b>Registration:</b>	N20818
<b>Aircraft:</b>	TEXTRON AVIATION INC 172S	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Birdstrike	<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The flight instructor and his student were conducting an instructional flight in the airport traffic pattern when the airplane collided with multiple geese during initial climb. Due to the collision, the engine experienced a loss of engine power, so the flight instructor continued straight ahead. He conducted a forced landing on a golf course and the airplane nosed over. The airplane sustained substantial damage to the fuselage, empennage, and both wings.

## Probable Cause and Findings

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

An in-flight collision with multiple geese during initial climb.

## Findings

<b>Environmental issues</b>	Animal(s)/bird(s) - Effect on equipment
<b>Environmental issues</b>	Animal(s)/bird(s) - Ability to respond/compensate

## Factual Information

### History of Flight

Initial climb	Birdstrike (Defining event)
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### Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	25, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	July 8, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 14, 2023
Flight Time:	325.1 hours (Total, all aircraft), 299.7 hours (Total, this make and model), 233.2 hours (Pilot In Command, all aircraft), 92.6 hours (Last 90 days, all aircraft), 59.7 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

### Student pilot Information

Certificate:	Student	Age:	41, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	February 10, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	12 hours (Total, all aircraft), 12 hours (Total, this make and model), 12 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	TEXTRON AVIATION INC	<b>Registration:</b>	N20818
<b>Model/Series:</b>	172S	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2020	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	172S12579
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	August 10, 2023 Annual	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1880 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C126 installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	IO-360-L2A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	ATP USA	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Dawn
<b>Observation Facility, Elevation:</b>	KAPA, 5870 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	06:53 Local	<b>Direction from Accident Site:</b>	7°
<b>Lowest Cloud Condition:</b>	Few / 10000 ft AGL	<b>Visibility</b>	10 miles
<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>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.2 inches Hg	<b>Temperature/Dew Point:</b>	18°C / 8°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Englewood, CO (APA)	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	Englewood, CO (APA)	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	05:30 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	CENTENNIAL APA	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	5884 ft msl	<b>Runway Surface Condition:</b>	Unknown
<b>Runway Used:</b>	17L	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	10001 ft / 100 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Minor	<b>Latitude, Longitude:</b>	39.539747,-104.85135

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Lindberg, Joshua
<b>Additional Participating Persons:</b>	Josh Friederichs; Federal Aviation Administration; Denver, CO
<b>Original Publish Date:</b>	October 17, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=192995">https://data.nts.gov/Docket?ProjectID=192995</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](#).