



# Aviation Investigation Final Report

<b>Location:</b>	Pepperell, Massachusetts	<b>Accident Number:</b>	ERA19TA278
<b>Date &amp; Time:</b>	September 20, 2019, 12:30 Local	<b>Registration:</b>	N895SF
<b>Aircraft:</b>	Cessna 208	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Skydiving		

## Analysis

The commercial pilot, 10 skydivers, and 1 passenger departed on a skydiving flight. After the skydivers jumped, the pilot and passenger returned to the airport to land. The pilot stated that, during the landing, he encountered a sudden downdraft and the airplane dropped out of the air from about 10 to 15 ft above the runway. The airplane landed hard and the nose landing gear collapsed; the airplane slid to the right side of the runway, crossed the parallel runway, and impacted a tree. Examination of the airplane revealed that the left wing was bent up about 3 ft from the wing tip and the nose landing gear was fracture-separated. The pilot stated that there were no mechanical anomalies with the airplane that would have precluded normal operation. Thus, it is likely that the pilot failed to maintain airplane control during the landing, which resulted in a hard landing.

## Probable Cause and Findings

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

The pilot's loss of control when the airplane encountered a downdraft during landing approach, which resulted in a subsequent hard landing and gear collapse.

## Findings

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<b>Aircraft</b>	Descent rate - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Downdraft - Effect on operation

## Factual Information

### History of Flight

Approach-VFR pattern final	Other weather encounter
Approach-VFR pattern final	Loss of control in flight (Defining event)
Landing	Hard landing

On September 20, 2019, about 1230 eastern daylight time, a Cessna 208B, N895SF, was substantially damaged during a hard landing at Pepperell Airport (26MA), Pepperell, Massachusetts. The commercial pilot and passenger were not injured. Visual meteorological conditions prevailed, and no flight plan was filed for the skydiving flight that departed at 1215. The airplane was privately owned and operated under the provisions of Title 14 *Code of Federal Regulations* Part 91.

According to the pilot, he was flying 10 skydivers and one passenger up to an altitude of 10,500 ft mean sea level. After the skydivers departed the airplane, the pilot returned to the airport and made a normal approach to land on runway 24. When the airplane was about 10-15 ft above the runway, he thought he encountered a sudden downdraft and the airplane just "dropped" out of the air and landed hard on the grass runway. The nose landing gear fractured off as the airplane slid to the right side of the runway and crossed the asphalt parallel runway. The airplane then contacted a small tree on the right wing that spun the airplane around. The left wing then contacted the ground and bent the last three ft of the wing tip up. The pilot stated there were no mechanical anomalies with the airplane at the time of the accident.

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that the left-wing tip was bent up from contact with the ground. The wing spar was bent, and the nose landing gear was fractured off.

The single-engine, high-wing airplane was built in 1988, and equipped with a Pratt and Whitney PT6, 675 horsepower engine. The most recent 100-hour inspection was completed on September 5, 2019. At the time of accident, the airframe total time was 18,426.0 hours. The engine total time was 18,240.7 hours. The airplane flew 22.6 hours since the last 100-hour inspection.

The pilot held a commercial pilot certificate, with ratings for airplane single-engine land, and airplane multi-engine land. He also held a flight instructor certificate with ratings for airplane single-engine and airplane multi-engine. His most recent FAA second class medical certificate was issued on June 4, 2019. He reported 3,837 total hours of flight experience at the time of the accident. A total of 400 hours were in this make and model.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	66, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	5-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	June 4, 2019
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	March 1, 2018
<b>Flight Time:</b>	3837 hours (Total, all aircraft), 400 hours (Total, this make and model), 3741 hours (Pilot In Command, all aircraft), 136 hours (Last 90 days, all aircraft), 49 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N895SF
<b>Model/Series:</b>	208 B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1988	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	208B0095
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	September 5, 2019 100 hour	<b>Certified Max Gross Wt.:</b>	8752 lbs
<b>Time Since Last Inspection:</b>	23 Hrs	<b>Engines:</b>	1 Turbo prop
<b>Airframe Total Time:</b>	18426 Hrs at time of accident	<b>Engine Manufacturer:</b>	Pratt & Whitney
<b>ELT:</b>	C91A installed, not activated	<b>Engine Model/Series:</b>	PT6A SERIES
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	675 Horsepower
<b>Operator:</b>	On file	<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>	Day
<b>Observation Facility, Elevation:</b>	KASH,200 ft msl	<b>Distance from Accident Site:</b>	5 Nautical Miles
<b>Observation Time:</b>	13:56 Local	<b>Direction from Accident Site:</b>	15°
<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>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.2 inches Hg	<b>Temperature/Dew Point:</b>	17°C / 9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Pepperell, MA (26MA)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Pepperell, MA (26MA)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:15 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Pepperell 26MA	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	176 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	24	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2820 ft / 25 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	42.696945,-71.548889

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Boggs, Daniel
<b>Additional Participating Persons:</b>	Keith Lapierre; FAA/FSDO; Burlington, MA
<b>Original Publish Date:</b>	January 28, 2021
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=100315">https://data.ntsb.gov/Docket?ProjectID=100315</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](#).