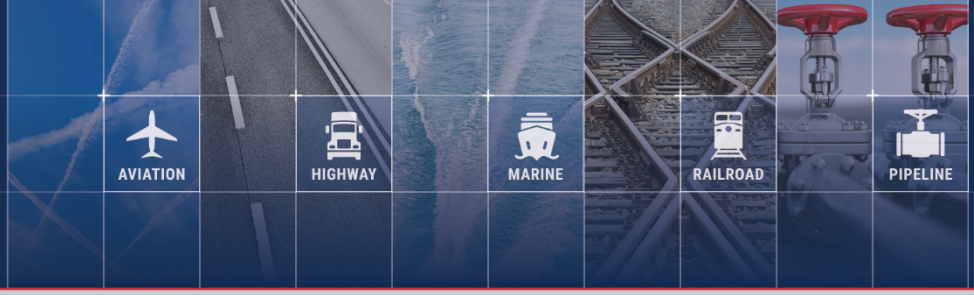

Aviation Investigation Final Report

Location:	Pepperell, Massachusetts	**Accident Number:**	ERA19TA278
Date & Time:	September 20, 2019, 12:30 Local	**Registration:**	N895SF
Aircraft:	Cessna 208	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	2 None
Flight Conducted Under:	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

Aircraft	Descent rate - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Environmental issues	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

Certificate:	Commercial	**Age:**	66,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	June 4, 2019
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	March 1, 2018
Flight Time:	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

Aircraft Make:	Cessna	**Registration:**	N895SF
Model/Series:	208 B	**Aircraft Category:**	Airplane
Year of Manufacture:	1988	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	208B0095
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	September 5, 2019 100 hour	**Certified Max Gross Wt.:**	8752 lbs
Time Since Last Inspection:	23 Hrs	**Engines:**	1 Turbo prop
Airframe Total Time:	18426 Hrs at time of accident	**Engine Manufacturer:**	Pratt & Whitney
ELT:	C91A installed, not activated	**Engine Model/Series:**	PT6A SERIES
Registered Owner:	On file	**Rated Power:**	675 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KASH,200 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	13:56 Local	**Direction from Accident Site:**	15°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.2 inches Hg	**Temperature/Dew Point:**	17°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pepperell, MA (26MA)	**Type of Flight Plan Filed:**	None
Destination:	Pepperell, MA (26MA)	**Type of Clearance:**	None
Departure Time:	12:15 Local	**Type of Airspace:**	

Airport Information

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

Wreckage and Impact Information

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

Administrative Information

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