



Aviation Investigation Final Report

Location:	Princeton, New Jersey	Accident Number:	ERA23LA339
Date & Time:	August 9, 2023, 09:15 Local	Registration:	N172FW
Aircraft:	Cessna 172R	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot was practicing solo takeoffs and landings in the airport traffic pattern. He successfully completed two takeoffs and landings. He then decided to attempt a soft-field technique takeoff. As the airplane began to lift off the ground, the pilot reported that an unexpected gust of wind from the northwest caught him off guard, and he lost control of the airplane. The airplane subsequently collided with trees, resulting in substantial damage to both wings. The pilot reported that there were no pre-impact mechanical malfunctions or failures that would have prevented normal operation of the airplane.

Probable Cause and Findings

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

The pilot's inadequate compensation for the prevailing wind conditions during takeoff, which resulted in a loss of control and subsequent collision with trees.

Findings

Environmental issues	Gusts - Response/compensation
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Takeoff	Loss of control in flight (Defining event)
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Pilot Information

Certificate:	Student	Age:	36,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	December 8, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	43 hours (Total, all aircraft), 43 hours (Total, this make and model), 7 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N172FW
Model/Series:	172R	Aircraft Category:	Airplane
Year of Manufacture:	1997	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17280080
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	August 7, 2023 100 hour	Certified Max Gross Wt.:	2450 lbs
Time Since Last Inspection:	9 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	10250 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91 installed, not activated	Engine Model/Series:	IO-360-L2A
Registered Owner:	On file	Rated Power:	160 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:	KTTN,190 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	08:53 Local	Direction from Accident Site:	224°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.8 inches Hg	Temperature/Dew Point:	22°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Princeton, NJ	Type of Flight Plan Filed:	None
Destination:	Princeton, NJ	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	PRINCETON 39N	Runway Surface Type:	Asphalt
Airport Elevation:	128 ft msl	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	None
Runway Length/Width:	3500 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	40.399089,-74.659006(est)

Administrative Information

Investigator In Charge (IIC):	Alleyne, Eric
Additional Participating Persons:	Michael J. Reichert; FAA/FSDO; Allentown, PA
Original Publish Date:	December 7, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192888

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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](#).