



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Lumberton, New Jersey	<b>Accident Number:</b>	ERA23LA296
<b>Date &amp; Time:</b>	June 10, 2023, 16:00 Local	<b>Registration:</b>	N8126X
<b>Aircraft:</b>	Piper PA-28-181	<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 - Instructional		

## Analysis

During a simulated soft field take off from a paved runway the student pilot followed the procedure of holding control wheel back pressure while accelerating for takeoff. The airplane began to lift off the runway into ground effect with an excessive nose high attitude and began drifting to left of center line. Upon realizing the airplane was in an imminent stall due to the high angle attack and veering away from the runway centerline, the flight instructor took over control of the airplane, but the airplane had already drifted over the grassy area off the left side of the runway. During the subsequent runway excursion, the right side of the horizontal stabilator struck two of the runway edge lights and incurred substantial damage. Neither the flight instructor, nor the student pilot, heard the impact and continued their flight lesson. The damage was discovered after they completed the lesson. Following the accident, the flight instructor stated that he should have been more proactive in either taking control, or ensuring the student was relaxing the back pressure on the control wheel as they started gaining speed to help get the airplane in to ground effect for the simulated soft field departure.

## Probable Cause and Findings

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

The student pilot's improper flight control inputs and the flight instructor's delayed remedial action during takeoff, which resulted in a runway excursion and impact with the runway edge lights.

## Findings

<b>Personnel issues</b>	Aircraft control - Student/instructed pilot
<b>Aircraft</b>	Pitch control - Not attained/maintained
<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Personnel issues</b>	Delayed action - Instructor/check pilot

## Factual Information

### History of Flight

Takeoff	Loss of control in flight (Defining event)
Takeoff	Runway excursion
Takeoff	Collision with terr/obj (non-CFIT)

### Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	52,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Unmanned (sUAS)	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	April 20, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 9, 2022
Flight Time:	1514 hours (Total, all aircraft), 100 hours (Total, this make and model), 1435 hours (Pilot In Command, all aircraft), 65 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft)		

### Student pilot Information

Certificate:	Student	Age:	42,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 3 With waivers/limitations	Last FAA Medical Exam:	October 1, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	21 hours (Total, all aircraft), 8 hours (Total, this make and model), 10 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N8126X
<b>Model/Series:</b>	PA-28-181	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1979	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Utility	<b>Serial Number:</b>	28-8090154
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	May 18, 2023 100 hour	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>	56 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	9105 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91 installed, not activated	<b>Engine Model/Series:</b>	O-360-A4M
<b>Registered Owner:</b>	B2FH LTD	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	Freeflight Aviation Llc.	<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>	KVAY, 50 ft msl	<b>Distance from Accident Site:</b>	2 Nautical Miles
<b>Observation Time:</b>	15:54 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few / 9000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots / 16 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	310°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.59 inches Hg	<b>Temperature/Dew Point:</b>	28°C / 7°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Lumberton, NJ (N14)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Lumberton, NJ (N14)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	16:00 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	FLYING W N14	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	49 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	01	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3496 ft / 75 ft	<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>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	39.934278,-74.807222(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gunther, Todd
<b>Additional Participating Persons:</b>	Judith Stillwagon; FAA/FSDO; Philadelphia, PA
<b>Original Publish Date:</b>	December 13, 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=192615">https://data.nts.gov/Docket?ProjectID=192615</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](#).