



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Grand Forks, North Dakota	Accident Number:	CEN23LA234
Date & Time:	May 28, 2023, 12:40 Local	Registration:	N771ND
Aircraft:	PIPER AIRCRAFT INC PA-28-181	Aircraft Damage:	Substantial
Defining Event:	Dragged wing/rotor/float/other	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor and his student were performing a soft field take off following a touch-and-go landing. The operator reported that the airplane started to drift to the left with a “higher than normal” pitch attitude and the airplane encountered a wind gust. The right wing dropped and contacted the runway surface. According to the flight instructor, during the take-off, the student “instantly” applied right aileron, instead of right rudder, to maintain the runway centerline. The flight instructor took over controls and continued the takeoff. While in the traffic pattern, the flight instructor noticed an “abnormality” on the right wing and landed the airplane without further incident. A visual inspection found that the right aileron sustained substantial damage. The operator stated that there were no mechanical malfunctions or failures that would have precluded normal operation. About the time of the accident wind was recorded as 160° at 17 knots with gusts to 29 knots.

Probable Cause and Findings

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

The student pilot’s failure to attain a proper takeoff attitude while demonstrating a soft field takeoff and his improper control inputs resulting in a dragged wing. Contributing to the accident were the gusting wind conditions.

Findings

Personnel issues	Aircraft control - Student/instructed pilot
Environmental issues	Gusts - Contributed to outcome

Factual Information

History of Flight

Takeoff	Dragged wing/rotor/float/other (Defining event)
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Pilot Information

Certificate:	Commercial; Flight instructor	Age:	23,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:	
Instructor Rating(s):	Airplane single-engine; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	July 21, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 11, 2022
Flight Time:	780 hours (Total, all aircraft), 742 hours (Total, this make and model), 532 hours (Pilot In Command, all aircraft), 137 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Student	Age:	21,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	May 12, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 9, 2023
Flight Time:	75 hours (Total, all aircraft), 75 hours (Total, this make and model), 1 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER AIRCRAFT INC	Registration:	N771ND
Model/Series:	PA-28-181	Aircraft Category:	Airplane
Year of Manufacture:	2018	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2881036
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	May 12, 2023 AAIP	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4706 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	IO-360-B4A
Registered Owner:	UNIVERSITY OF NORTH DAKOTA	Rated Power:	180 Horsepower
Operator:	UNIVERSITY OF NORTH DAKOTA	Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KGFK,839 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	12:53 Local	Direction from Accident Site:	248°
Lowest Cloud Condition:	Few / 15000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	17 knots / 29 knots	Turbulence Type Forecast/Actual:	None /
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	30°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Grand Forks, ND	Type of Flight Plan Filed:	None
Destination:	Grand Forks, ND	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	Class D

Airport Information

Airport:	GRAND FORKS INTL GFK	Runway Surface Type:	Concrete
Airport Elevation:	845 ft msl	Runway Surface Condition:	Dry
Runway Used:	17L	IFR Approach:	None
Runway Length/Width:	3900 ft / 75 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	47.947587,-97.166226(est)

Administrative Information

Investigator In Charge (IIC): Rutt, Brian

Additional Participating Persons: Gary Kwasniewski; FAA FSDO; ND

Original Publish Date: July 27, 2023

Last Revision Date:

Investigation Class: [Class 4](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=192337>

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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](#).