



# Aviation Investigation Final Report

<b>Location:</b>	Knoxville, Tennessee	<b>Accident Number:</b>	ERA23LA227
<b>Date &amp; Time:</b>	May 4, 2023, 14:00 Local	<b>Registration:</b>	N26941
<b>Aircraft:</b>	GULFSTREAM AMERICAN CORP AA-5A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The student pilot was departing on her third solo flight. During the takeoff the airplane began drifting to the left and the pilot attempted to correct with right rudder application. The pilot said that it then felt as if the airplane encountered a gust of wind that pushed it to the left off the runway and into the grass. The airplane's left wing struck a runway approach light and was substantially damaged. The pilot reported that there were no preimpact mechanical malfunctions or failures of the airplane that would have precluded normal operation.

## Probable Cause and Findings

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

The pilot's failure to maintain directional control during takeoff in gusting wind conditions.

## Findings

<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Gusts - Response/compensation



## Factual Information

### History of Flight

Takeoff	Loss of control on ground (Defining event)
Takeoff	Runway excursion

### Pilot Information

Certificate:	Student	Age:	33,Female
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	March 9, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	49.2 hours (Total, all aircraft), 49.2 hours (Total, this make and model), 2.2 hours (Pilot In Command, all aircraft), 46 hours (Last 90 days, all aircraft), 11.4 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

Aircraft Make:	GULFSTREAM AMERICAN CORP	Registration:	N26941
Model/Series:	AA-5A	Aircraft Category:	Airplane
Year of Manufacture:	1979	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	AA5A0839
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	March 21, 2023 100 hour	Certified Max Gross Wt.:	2200 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3577.02 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	O-320-E2G
Registered Owner:	On file	Rated Power:	150 Horsepower
Operator:	Fast Track Flight Training	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DKX,833 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	13:55 Local	Direction from Accident Site:	265°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots / 10 knots	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	20°C / 5°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Knoxville, TN	Type of Flight Plan Filed:	VFR
Destination:	Knoxville, TN	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class E

## Airport Information

Airport:	KNOXVILLE DOWNTOWN ISLAND DKX	Runway Surface Type:	Asphalt
Airport Elevation:	833 ft msl	Runway Surface Condition:	Dry
Runway Used:	26	IFR Approach:	None
Runway Length/Width:	3499 ft / 75 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	35.964267,-83.870311

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Freeze, Christopher
<b>Additional Participating Persons:</b>	Benjamin Clayton; FAA/FSDO; Nashville, TN
<b>Original Publish Date:</b>	June 29, 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.ntsb.gov/Docket?ProjectID=139289">https://data.ntsb.gov/Docket?ProjectID=139289</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](#).