



# Aviation Investigation Final Report

<b>Location:</b>	Harrisonburg, Virginia	<b>Accident Number:</b>	ERA24LA005
<b>Date &amp; Time:</b>	October 7, 2023, 20:30 UTC	<b>Registration:</b>	N13BF
<b>Aircraft:</b>	AVIAT AIRCRAFT INC A-1C-180	<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 - Personal		

## Analysis

The pilot was returning to his home airport, and prior to landing, he received an automated weather briefing noting a 90-degree crosswind that was from 320 degrees at 12 knots, with gusts. The runway in use was runway 05, and a preceding aircraft reported a direct crosswind. The initial approach and landing were uneventful. When the airplane touched down and all three wheels were on the ground, an unexpected gust of wind lifted the left wing and started pushing the airplane towards the right. The airplane exited the runway into the grass. The wind then lifted the tail of the airplane and it nosed over onto the vertical stabilizer. The fuselage and empennage of the airplane were substantially damaged. The pilot reported that there were no mechanical malfunctions or failures with 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 inadequate compensation for the prevailing wind conditions, which resulted in a loss of control and subsequent runway excursion.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Crosswind - Response/compensation

## Factual Information

### History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Runway excursion
Landing-landing roll	Nose over/nose down

### Pilot Information

Certificate:	Private	Age:	43,Male
Airplane Rating(s):	Single-engine land	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 2 Without waivers/limitations	Last FAA Medical Exam:	October 2, 2019
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	772 hours (Total, all aircraft), 249 hours (Total, this make and model), 731 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AVIAT AIRCRAFT INC	<b>Registration:</b>	N13BF
<b>Model/Series:</b>	A-1C-180	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2008	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	3021
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	May 2, 2023 Annual	<b>Certified Max Gross Wt.:</b>	2200 lbs
<b>Time Since Last Inspection:</b>	47 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1004 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91 installed, not activated	<b>Engine Model/Series:</b>	O-360-A1P
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	On file	<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>	KSHD, 1201 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	16:15 Local	<b>Direction from Accident Site:</b>	0°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	15 knots / 19 knots	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	320°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.88 inches Hg	<b>Temperature/Dew Point:</b>	16°C / 0°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	New Market, VA (8W2)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Harrisonburg, VA	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:40 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	SHENANDOAH VALLEY RGNL SHD	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1201 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	05	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	6002 ft / 150 ft	<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 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>	1 None	<b>Latitude, Longitude:</b>	38.263833,-78.896444(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Alleyne, Eric
<b>Additional Participating Persons:</b>	Steve M. Harness; FAA/FSDO; Richmond, VA
<b>Original Publish Date:</b>	February 29, 2024
<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=193224">https://data.nts.gov/Docket?ProjectID=193224</a>

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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](#).