



# Aviation Investigation Final Report

<b>Location:</b>	Liberty, South Carolina	<b>Accident Number:</b>	ERA23LA387
<b>Date &amp; Time:</b>	September 29, 2023, 08:10 Local	<b>Registration:</b>	N557JM
<b>Aircraft:</b>	JOHN W MOLL Vans RV-7	<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 - Flight test		

## Analysis

After completing a successful landing, the pilot of the tailwheel-equipped airplane applied engine power to begin the takeoff. During the takeoff roll, the airplane began to veer right. The pilot applied left rudder to correct; however, the airplane veered left and exited the left side of the runway. The airplane impacted the precision approach path indicators light system resulting in substantial damage to the left wing and left horizontal stabilizer. The pilot reported that there were no preaccident 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 failure to maintain directional control during the takeoff roll which resulted in a runway excursion and substantial damage to the left wing and left horizontal stabilizer.

## Findings

<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot



## Factual Information

### History of Flight

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

### Pilot Information

Certificate:	Private	Age:	66,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	May 31, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 31, 2023
Flight Time:	151 hours (Total, all aircraft), 4 hours (Total, this make and model), 53 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	JOHN W MOLL	<b>Registration:</b>	N557JM
<b>Model/Series:</b>	Vans RV-7	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2023	<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	70912
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	June 15, 2023 Unknown	<b>Certified Max Gross Wt.:</b>	1800 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	0.7 Hrs at time of accident	<b>Engine Manufacturer:</b>	Aerosport Power
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-360-M1S
<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>	LQK,1014 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	08:15 Local	<b>Direction from Accident Site:</b>	338°
<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>	/	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.13 inches Hg	<b>Temperature/Dew Point:</b>	13°C / 13°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Liberty, SC	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Liberty, SC	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	PICKENS COUNTY LQK	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1013 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	23	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5002 ft / 100 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	34.813474,-82.698247(est)

## Preventing Similar Accidents

### Understanding Flight Experience (SA-040)

#### The Problem

Aircraft have different flight characteristics, performance, and systems. Pilots may have many hours of experience, but their experience specific to the aircraft make/model and/or equipment they are flying may be limited.

Although Federal Aviation Administration (FAA) regulations allow pilots to operate aircraft that are designated by a specific category and class, differences among different types of aircraft within the same category and class can be significant. Even if operating a specific type of aircraft is allowed by regulations, it does not mean the practice is safe.

## What can you do?

- Obtain the necessary training from a flight instructor experienced in the aircraft that you plan to fly so that you understand the flight characteristics and emergency procedures for that aircraft. Meeting the minimum requirements does not mean that you are proficient.
- Obtain refresher training if you have not flown for a long period; long periods of no flying, even for high-time pilots, can have an adverse impact on your ability to respond to unusual situations and emergencies.
- Seek out a qualified test pilot to assist in flight testing homebuilt aircraft you are not familiar with.
- Seek out instruction for advanced avionics and systems. Identical make-and-model aircraft can have considerably different cockpit panels.

See <https://www.nts.gov/Advocacy/safety-alerts/Documents/SA-040.pdf> for additional resources.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Young, Joshua
<b>Additional Participating Persons:</b>	Todd Clamp; FAA/FSDO; Columbia, SC
<b>Original Publish Date:</b>	November 9, 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=193172">https://data.nts.gov/Docket?ProjectID=193172</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](#).