



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Lake Elmo, Minnesota	<b>Accident Number:</b>	CEN24LA149
<b>Date &amp; Time:</b>	April 5, 2024, 14:54 Local	<b>Registration:</b>	N245EM
<b>Aircraft:</b>	Van's Aircraft RV-12iS	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Abnormal runway contact	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The solo student pilot was landing the light-sport airplane on the runway when it bounced multiple times. The nose gear collapsed, the propeller struck the ground, and the airplane came to rest upright on the runway in a nose-down attitude. The student pilot was able to exit the airplane without further incident. The airplane sustained substantial damage to the fuselage.

The student pilot reported there were no preimpact mechanical malfunctions or failures with the airframe or the engine that would have precluded normal operation. The student pilot further reported that the accident could have been prevented by initiating a go-around after the first bounce but concluded that his reason for not initiating a go-around, was due to his lack of experience.

## Probable Cause and Findings

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

The student pilot's improper landing flare, which resulted in a bounced landing, and the nose gear collapsing. Contributing to the accident was the student pilot's lack of experience.

## Findings

<b>Personnel issues</b>	Aircraft control - Student/instructed pilot
<b>Personnel issues</b>	Incorrect action performance - Student/instructed pilot
<b>Personnel issues</b>	Total experience - Student/instructed pilot
<b>Aircraft</b>	Landing flare - Not attained/maintained

## Factual Information

### History of Flight

<b>Landing-flare/touchdown</b>	Abnormal runway contact (Defining event)
<b>Landing-flare/touchdown</b>	Part(s) separation from AC
<b>Landing-flare/touchdown</b>	Landing gear collapse
<b>Landing-flare/touchdown</b>	Loss of control on ground
<b>Landing-flare/touchdown</b>	Nose over/nose down
<b>Post-impact</b>	Evacuation

### Pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	20, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	5-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	August 11, 2023
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	March 31, 2024
<b>Flight Time:</b>	(Estimated) 49 hours (Total, all aircraft), 49 hours (Total, this make and model), 4 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Van's Aircraft	<b>Registration:</b>	N245EM
<b>Model/Series:</b>	RV-12iS	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2020	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental light sport (Special)	<b>Serial Number:</b>	12094
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	March 8, 2024 100 hour	<b>Certified Max Gross Wt.:</b>	1320 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	812.6 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Rotax Aircraft Engines
<b>ELT:</b>	C91 installed, not activated	<b>Engine Model/Series:</b>	912iS
<b>Registered Owner:</b>	TC Asset and Rentals, LLC	<b>Rated Power:</b>	100 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>	None	<b>Operator Designator Code:</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>	KSTP, 711 ft msl	<b>Distance from Accident Site:</b>	9 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	247°
<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>	4 knots / None	<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>	30.16 inches Hg	<b>Temperature/Dew Point:</b>	14°C / -2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Lake Elmo, MN	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Lake Elmo, MN	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	LAKE ELMO 21D	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	932 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	14/32	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3500 ft / 75 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>	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>	44.994257,-92.853946(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hodges, Michael
<b>Additional Participating Persons:</b>	Gregory Thurston; FAA Minneapolis FSDO; Minneapolis, MN
<b>Original Publish Date:</b>	May 9, 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=194048">https://data.nts.gov/Docket?ProjectID=194048</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](#).