



# Aviation Investigation Final Report

<b>Location:</b>	Williston, Florida	<b>Accident Number:</b>	ERA23LA153
<b>Date &amp; Time:</b>	January 31, 2023, 14:30 Local	<b>Registration:</b>	N4811E
<b>Aircraft:</b>	GREEN RICHARD H VAN'S RV7A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Miscellaneous/other	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The private pilot stated that during takeoff from runway 23 when the flight was 20 ft above the runway, the tip-up canopy became unlatched and “flipped up” which eliminated his forward vision and made the airplane difficult to control. He returned for landing and reported the, “landing was hard.” During the landing roll the nose landing gear dug in and the airplane nosed over resulting in structural damage to the vertical stabilizer and damage to the rudder.

According to a Service Letter from the airplane designer, in the event that a tip-up canopy opened in-flight, field reports indicate that the airplane will “most likely pitch nose down abruptly. The severity of the pitching moment can depend on speed, attitude, and weight and balance.”

According to a Federal Aviation Administration (FAA) inspector, postaccident examination of the tip-up canopy revealed the canopy frame was distorted and the left side of the canopy frame was damaged which prevented the left aft side from latching closed. The right aft side of the canopy could be latched closed and was unable to be manually raised once closed. The airplane was equipped with a secondary canopy latch at the top rear of the canopy frame. No discrepancies of it were reported. Further, no discrepancies were reported or observed on either “catch tooth” of the latch handle or canopy latch. The airplane was not equipped with a tip-up canopy latch warning system.

While the FAA inspector reported no evidence of preimpact failure or malfunction of the canopy latch system (primary or secondary), the damage to the canopy frame likely occurred during the accident sequence. It is likely that the canopy was not closed and latched on either aft side and the canopy latch handle was not fully engaged with the canopy latch during takeoff. Had the airplane been equipped with

a tip-up canopy latch warning system, it is likely that the improperly closed canopy would have been detected by the pilot.

## Probable Cause and Findings

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

The hard landing and subsequent nose over during the forced landing. Contributing to the accident were the improperly secured canopy, and the distraction it created.

### Findings

<b>Personnel issues</b>	Preflight inspection - Pilot
<b>Aircraft</b>	(general) - Incorrect use/operation
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	Descent/approach/glide path - Not attained/maintained

## Factual Information

### History of Flight

Takeoff	Miscellaneous/other (Defining event)
Landing-flare/touchdown	Hard landing
Landing-landing roll	Nose over/nose down

### Pilot Information

Certificate:	Private	Age:	86,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	BasicMed Without waivers/limitations	Last FAA Medical Exam:	December 8, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 21, 2022
Flight Time:	1995 hours (Total, all aircraft), 104 hours (Total, this make and model), 9 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	GREEN RICHARD H	<b>Registration:</b>	N4811E
<b>Model/Series:</b>	VAN'S RV7A NO SERIES	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2008	<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	70455
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	January 3, 2023 Condition	<b>Certified Max Gross Wt.:</b>	1800 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	920 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	O-360
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	
<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>	X60,76 ft msl	<b>Distance from Accident Site:</b>	0.8 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	11°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	Unknown / None
<b>Wind Direction:</b>	270°	<b>Turbulence Severity Forecast/Actual:</b>	Unknown / N/A
<b>Altimeter Setting:</b>	29.94 inches Hg	<b>Temperature/Dew Point:</b>	19.4°C / 3.9°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Williston, FL	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	St. Petersburg, FL (SPG)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Williston Municipal Airport X60	<b>Runway Surface Type:</b>	Concrete
<b>Airport Elevation:</b>	76 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	23	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	6669 ft / 100 ft	<b>VFR Approach/Landing:</b>	Forced landing

## 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>	29.346834,-82.472207

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Monville, Timothy
<b>Additional Participating Persons:</b>	Ismael Reyes; FAA/FSDO; Tampa, FL
<b>Original Publish Date:</b>	June 23, 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=106903">https://data.nts.gov/Docket?ProjectID=106903</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](#).