



Aviation Investigation Final Report

Location:	Williston, Florida	Accident Number:	ERA23LA153
Date & Time:	January 31, 2023, 14:30 Local	Registration:	N4811E
Aircraft:	GREEN RICHARD H VAN'S RV7A	Aircraft Damage:	Substantial
Defining Event:	Miscellaneous/other	Injuries:	1 None
Flight Conducted Under:	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

Personnel issues	Preflight inspection - Pilot
Aircraft	(general) - Incorrect use/operation
Personnel issues	Aircraft control - Pilot
Aircraft	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

Aircraft Make:	GREEN RICHARD H	Registration:	N4811E
Model/Series:	VAN'S RV7A NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	2008	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	70455
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	January 3, 2023 Condition	Certified Max Gross Wt.:	1800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	920 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	O-360
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	X60,76 ft msl	Distance from Accident Site:	0.8 Nautical Miles
Observation Time:	14:53 Local	Direction from Accident Site:	11°
Lowest Cloud Condition:	Clear	Visibility	
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	Unknown / None
Wind Direction:	270°	Turbulence Severity Forecast/Actual:	Unknown / N/A
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	19.4°C / 3.9°C
Precipitation and Obscuration:			
Departure Point:	Williston, FL	Type of Flight Plan Filed:	None
Destination:	St. Petersburg, FL (SPG)	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	29.346834,-82.472207

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Ismael Reyes; FAA/FSDO; Tampa, FL
Original Publish Date:	June 23, 2023
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=106903

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](#).