



Aviation Investigation Final Report

Location:	Vero Beach, Florida	Accident Number:	ERA24LA250
Date & Time:	June 7, 2024, 09:00 Local	Registration:	N287ND
Aircraft:	Piper PA28R	Aircraft Damage:	Substantial
Defining Event:	Aircraft structural failure	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

During a preflight inspection of a flight school airplane, the flight instructor noticed a missing rivet on the left side of the vertical stabilizer. He also noticed that the skin of the vertical stabilizer was bent outwards. The flight instructor walked around to the right side of the airplane and noticed that the same rivet was missing on that side, and the skin was also bent outwards. He called the maintenance department out to the airplane to look at the damage. They subsequently told him the airplane was not airworthy and to write it up as a discrepancy. The maintenance department immediately grounded all the other airplanes and inspected the vertical stabilizers for any damage. No other damage was noted on the remaining 49 airplanes of the flight school operator's fleet. It could not be determined when the damage to the vertical stabilizer occurred, but the damage was likely the result of excessive side loading of the vertical stabilizer during flight.

Probable Cause and Findings

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

Excessive side loading of the vertical stabilizer.

Findings

Aircraft	Vertical stabilizer - Capability exceeded
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Factual Information

History of Flight

Prior to flight	Aircraft structural failure (Defining event)
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Information

Certificate:	Age:
Airplane Rating(s):	Seat Occupied:
Other Aircraft Rating(s):	Restraint Used:
Instrument Rating(s):	Second Pilot Present:
Instructor Rating(s):	Toxicology Performed:
Medical Certification:	Last FAA Medical Exam:
Occupational Pilot:	Last Flight Review or Equivalent:
Flight Time:	

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N287ND
Model/Series:	PA28R 201	Aircraft Category:	Airplane
Year of Manufacture:	2000	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2844036
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	April 26, 2024 AAIP	Certified Max Gross Wt.:	2750 lbs
Time Since Last Inspection:	44 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8899 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	C126 installed, not activated	Engine Model/Series:	IO360 SER A&C
Registered Owner:	SKYBORNE AIRLINE ACADEMY INC	Rated Power:	200 Horsepower
Operator:	On file	Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	FPR,19 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	08:53 Local	Direction from Accident Site:	167°
Lowest Cloud Condition:	Clear	Visibility	9 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.91 inches Hg	Temperature/Dew Point:	28°C / 23°C
Precipitation and Obscuration:			
Departure Point:	Vero Beach, FL	Type of Flight Plan Filed:	None
Destination:	Vero Beach, FL	Type of Clearance:	None
Departure Time:		Type of Airspace:	Unknown

Airport Information

Airport:	Vero Beach Regional VRB	Runway Surface Type:	
Airport Elevation:	23 ft msl	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	27.655555,-80.417954(est)

Administrative Information

Investigator In Charge (IIC):	Boggs, Daniel
Additional Participating Persons:	James Holmes; FAA/FSDO; Orlando, FL
Original Publish Date:	July 18, 2024
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=194424

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](#).