



Aviation Investigation Final Report

Location:	Townsend, Delaware	Accident Number:	ERA24LA264
Date & Time:	June 14, 2024, 12:45 Local	Registration:	N298Z
Aircraft:	Vans RV6	Aircraft Damage:	Substantial
Defining Event:	Nose over/nose down	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he was in the traffic pattern for landing at his home airport. The turf runway was 3,300 ft-long and 100 ft-wide, and the pilot described its condition as dry, but “pretty bumpy.” The approach and landing were normal, with the main landing gear touching down first, about 60 mph. After he lowered the nose landing gear to the runway, the airplane nosed over and came to rest, inverted. He was met by neighbors and first responders who assisted him out of the airplane and was taken to a local hospital for treatment of his injuries.

An inspector with the Federal Aviation Administration responded to the accident site and examined the wreckage. There was substantial damage to one wing, the fuselage, and the vertical stabilizer. He reported that the landing surface was bumpy; however, he could not determine an exact location where the landing gear dug in. After the wreckage was recovered, the landing gear was examined. The nose landing gear leg was found unbroken, but bent aft about 30-40°, consistent with the nose wheel digging into rough or bumpy turf. The nose wheel casted and turned freely without restriction. There were no areas of preexisting mechanical anomaly found.

Probable Cause and Findings

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

An inadvertent encounter with rough or soft terrain during landing, resulting in a bent nose landing gear leg and subsequent nose over.

Findings

Environmental issues

Soft surface - Effect on equipment

Factual Information

History of Flight

Landing-landing roll	Nose over/nose down (Defining event)
----------------------	--------------------------------------

Pilot Information

Certificate:	Private	Age:	56,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 With waivers/limitations	Last FAA Medical Exam:	November 13, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 29, 2022
Flight Time:	447 hours (Total, all aircraft), 181 hours (Total, this make and model), 447 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Vans	Registration:	N298Z
Model/Series:	RV6 A	Aircraft Category:	Airplane
Year of Manufacture:	1999	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	60164
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	June 20, 2023 Condition	Certified Max Gross Wt.:	1775 lbs
Time Since Last Inspection:	26 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	947 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91A installed, not activated	Engine Model/Series:	O-320-D1A
Registered Owner:	On file	Rated Power:	160 Horsepower
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:	DOV,28 ft msl	Distance from Accident Site:	19 Nautical Miles
Observation Time:	12:55 Local	Direction from Accident Site:	150°
Lowest Cloud Condition:	Few / 17000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / None	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.86 inches Hg	Temperature/Dew Point:	31°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Dover, DE (33N)	Type of Flight Plan Filed:	None
Destination:	Townsend, DE	Type of Clearance:	None
Departure Time:	12:25 Local	Type of Airspace:	Class E

Airport Information

Airport:	Spirit Airpark DE20	Runway Surface Type:	Grass/turf
Airport Elevation:	80 ft msl	Runway Surface Condition:	Rough;Vegetation
Runway Used:	20	IFR Approach:	None
Runway Length/Width:	3300 ft / 100 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	39.373611,-75.745833(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Patrick Wilcox; FAA/FSDO; Philadelphia, PA
Original Publish Date:	September 4, 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=194484

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](#).