



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Garden Plain, Kansas	<b>Accident Number:</b>	CEN23LA222
<b>Date &amp; Time:</b>	June 3, 2023, 18:00 Local	<b>Registration:</b>	N1PW
<b>Aircraft:</b>	Pitts S-2S	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Sys/Comp malf/fail (non-power)	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

During the landing roll on a grass runway, the airplane decelerated quicker than the pilot expected, pulled to the right, and nosed over which resulted in a ground loop. The right lower wing and right elevator were substantially damaged during the ground loop.

Postaccident examination of the airplane showed that the right main landing gear wheel inner tube and tire was likely flat prior to landing due to an undetected cut in the inner tube. The flat tire resulted in wheel pant fairing to contact the grass runway and the airplane became uncontrollable. Following the accident, the inner tube was inflated by the pilot and an audible leak was observed from the cut rubber area. The pilot reported that the tube was replaced during last the condition inspection, and it was unknown what caused the cut in the inner tube.

## Probable Cause and Findings

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

The pilot's inability to maintain directional control during landing roll due to a flat tire.

## Findings

<b>Aircraft</b>	Tube - Failure
<b>Personnel issues</b>	Aircraft control - Pilot

## Factual Information

### History of Flight

<b>Landing-landing roll</b>	Sys/Comp malf/fail (non-power) (Defining event)
<b>Landing-landing roll</b>	Nose over/nose down

### Pilot Information

<b>Certificate:</b>	Airline transport; Flight instructor; Military	<b>Age:</b>	45, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	5-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	March 3, 2023
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	March 29, 2023
<b>Flight Time:</b>	10300 hours (Total, all aircraft), 560 hours (Total, this make and model), 8295 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 32 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Pitts	<b>Registration:</b>	N1PW
<b>Model/Series:</b>	S-2S	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1979	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	1004
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	June 24, 2022 Condition	<b>Certified Max Gross Wt.:</b>	1650 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1759 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	AEIO-540-D4A5 (Exp)
<b>Registered Owner:</b>	WELKIN AERO INC	<b>Rated Power:</b>	260 Horsepower
<b>Operator:</b>	WELKIN AERO INC	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>	N/A	<b>Operator Designator Code:</b>	N/A

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KICT, 1318 ft msl	<b>Distance from Accident Site:</b>	9 Nautical Miles
<b>Observation Time:</b>	18:04 Local	<b>Direction from Accident Site:</b>	95°
<b>Lowest Cloud Condition:</b>	Scattered / 4500 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Overcast / 10000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	13 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	120°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.89 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 17°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Grand Island, NE (GRI)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Garden Plain, KS	<b>Type of Clearance:</b>	VFR; VFR flight following
<b>Departure Time:</b>	16:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Yoder Airpark SN61	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	1460 ft msl	<b>Runway Surface Condition:</b>	Dry;Soft
<b>Runway Used:</b>	18	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	4000 ft / 100 ft	<b>VFR Approach/Landing:</b>	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>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	37.66097,-97.629211

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Finne, Andrew
<b>Additional Participating Persons:</b>	Terrell, Richard ; FAA-FSDO; Wichita, KS
<b>Original Publish Date:</b>	October 5, 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=192302">https://data.nts.gov/Docket?ProjectID=192302</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](#).