



Aviation Investigation Final Report

Location:	Toughkenamon, Pennsylvania	Accident Number:	ERA23LA198
Date & Time:	March 22, 2023, 13:15 Local	Registration:	N669YK
Aircraft:	S C AEROSTAR S A YAK-52	Aircraft Damage:	Substantial
Defining Event:	Collision during takeoff/land	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that while on final approach to the destination airport the airplane unexpectedly began to descend. The pilot added power, pitched up, and arrested the descent. Seeing no obstacles in front of the airplane, the pilot elected to continue the approach and subsequently impacted power lines; the impact resulted in substantial damage to the right aileron. The pilot reported that he never saw the powerlines and therefore did not make any attempt to avoid them. The pilot reported that there were no known preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation during the flight.

Probable Cause and Findings

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

The pilot's failure to see and avoid powerlines while on approach to land.

Findings

Personnel issues	Lack of action - Pilot
Environmental issues	Wire - Awareness of condition

Factual Information

History of Flight

Approach-VFR pattern final	Collision during takeoff/land (Defining event)
Landing	Off-field or emergency landing

On March 22, 2023, at 1315 eastern daylight time, a SC Aerostar Yak-52, N669YK, was substantially damaged when it was involved in an accident near Toughkenamon, Pennsylvania. The private pilot and passenger were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that he departed from his home airport bound for the New Garden Airport (N57), Toughkenamon, Pennsylvania. He reported “I did not want to upset my passenger with a significant descent rate in addition to the turbulence, so, with my passenger in mind, I flew my final approach at an altitude that supported a gentle rate of descent.” He also reported that he “had to extend my downwind for slower landing traffic, which forced a longer straight in approach.” While on the final leg of the traffic pattern the airplane unexpectedly began to descend. The pilot added power and pitched up to arrest the descent. After arresting the descent, the pilot continued the approach. Witness video from a dash camera of a vehicle nearby showed the airplane impacting a set of powerlines. After impacting the powerlines, the pilot landed in a field just short of the runway. The impact with the powerlines resulted in substantial damage to the right aileron. The pilot reported “it was physically not possible for me to see the powerlines from my seat in the aircraft at the altitude and attitude I was flying” and that he did not make any attempt to avoid the lines.

In a video posted to an internet video publishing platform, the pilot recounted details of the accident, “After the airplane sank, I shoved up the power, raised the nose a bit, and stopped the sink. I could still see down the runway, so I continued the approach, didn’t see anything directly in front of me.” Furthermore, he said, “I thought I was further, closer, to the airport than I was, didn’t factor these into being a hazard potentially” when referencing the powerlines.

The pilot reported that there were no known preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation. He also reported that the airplane performed as it normally did for the duration of the flight before the accident.

Pilot Information

Certificate:	Private	Age:	34, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
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 Waiver time limited special	Last FAA Medical Exam:	April 1, 2019
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 19, 2022
Flight Time:	217 hours (Total, all aircraft), 110 hours (Total, this make and model), 150 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	S C AEROSTAR S A	Registration:	N669YK
Model/Series:	YAK-52	Aircraft Category:	Airplane
Year of Manufacture:	1984	Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	844206
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	July 28, 2022 Condition	Certified Max Gross Wt.:	2900 lbs
Time Since Last Inspection:	21.1 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1464.7 Hrs at time of accident	Engine Manufacturer:	Vedenev
ELT:	C126 installed, not activated	Engine Model/Series:	M14P
Registered Owner:	ACROHOLICS LLC	Rated Power:	360 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:	ILG,73 ft msl	Distance from Accident Site:	12 Nautical Miles
Observation Time:	13:51 Local	Direction from Accident Site:	144°
Lowest Cloud Condition:	Few / 10000 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	Unknown / Terrain-Induced
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	Unknown / Unknown
Altimeter Setting:	30.3 inches Hg	Temperature/Dew Point:	17°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	New Castle, DE (ILG)	Type of Flight Plan Filed:	None
Destination:	Toughkenamon, PA	Type of Clearance:	VFR
Departure Time:	13:09 Local	Type of Airspace:	Class G

Airport Information

Airport:	NEW GARDEN N57	Runway Surface Type:	Asphalt
Airport Elevation:	435 ft msl	Runway Surface Condition:	Dry;Vegetation
Runway Used:	24	IFR Approach:	None
Runway Length/Width:	3693 ft / 60 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	39.836536,-75.761153(est)

Administrative Information

Investigator In Charge (IIC):	Young, Joshua
Additional Participating Persons:	Stephan A. Koza; FAA/FSDO; Philadelphia, PA
Original Publish Date:	June 5, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=107072

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](#).