



# Aviation Investigation Final Report

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<b>Location:</b>	Ozark, Arkansas	<b>Accident Number:</b>	CEN21LA454
<b>Date &amp; Time:</b>	September 24, 2021, 13:30 Local	<b>Registration:</b>	N161JB
<b>Aircraft:</b>	Kitfox IV	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Other weather encounter	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Air race/show		

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## Analysis

The pilot reported that he was conducting a practice flight for a short-takeoff-and-landings (STOL) competition. The intended flight profile was a timed course consisting of multiple takeoffs-and-landings on several turf runways to demonstrate the STOL capabilities of the airplane and the pilot flying. The pilot intentionally flew the airplane at a low altitude throughout the flight. The flight path was in a river valley with tall ridges on either side of the river and there was a known risk of encountering downdrafts while flying the course.

While performing a turn toward one of the airstrips, and less than 100ft above the ground the pilot reported encountering a downdraft and descended rapidly. In response, the pilot increased the engine throttle from near idle to maximum power. The pilot reported that the engine “stumbled” briefly because of the rapidly increased throttle, so he leveled the airplane’s wings and lowered the airplane’s pitch to increase airspeed. As the airplane approached an open area for landing, the airplane’s left main landing gear struck a tree, and the airplane subsequently impacted the ground. The airplane sustained substantial damage to the fuselage and the right wing. The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The weather conditions at the time of the accident included clear skies with light surface winds from the south.

## 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 altitude after the airplane encountered a downdraft while he intentionally flew at a low-altitude during a practice for a short-takeoff-and-landing flight competition.

## Findings

<b>Environmental issues</b>	Downdraft - Effect on operation
<b>Environmental issues</b>	Downdraft - Ability to respond/compensate
<b>Aircraft</b>	Altitude - Attain/maintain not possible
<b>Aircraft</b>	Descent/approach/glide path - Attain/maintain not possible
<b>Personnel issues</b>	(general) - Pilot

## Factual Information

### History of Flight

<b>Maneuvering-low-alt flying</b>	Other weather encounter (Defining event)
<b>Maneuvering-low-alt flying</b>	Collision with terr/obj (non-CFIT)

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	49, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	September 14, 2021
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	January 30, 2020
<b>Flight Time:</b>	538 hours (Total, all aircraft), 172 hours (Total, this make and model), 511 hours (Pilot In Command, all aircraft), 75 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Kitfox	<b>Registration:</b>	N161JB
<b>Model/Series:</b>	IV	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1993	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	1902
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	August 27, 2021 Condition	<b>Certified Max Gross Wt.:</b>	1200 lbs
<b>Time Since Last Inspection:</b>	7 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	798.7 Hrs at time of accident	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	UL670-BH17
<b>Registered Owner:</b>	Gregory A. Jacobi	<b>Rated Power:</b>	93 Horsepower
<b>Operator:</b>	Gregory A. Jacobi	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	13:30 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/ 5 knots	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	26.7°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Ozark, AR (51AR)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Ozark, AR (51AR)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Byrd's Backcountry Airstrip 51AR	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	800 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<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>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	35.6785,-93.7286(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Fox, Andrew
<b>Additional Participating Persons:</b>	Nathan Bradshaw; Federal Aviation Administration - Little Rock FSDO; Little Rock, AR
<b>Original Publish Date:</b>	June 22, 2022
<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.ntsb.gov/Docket?ProjectID=103968">https://data.ntsb.gov/Docket?ProjectID=103968</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](#).