Aviation Investigation Final Report

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

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

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

Factual Information

History of Flight

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

Pilot Information

Certificate:	Private	**Age:**	49,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	4-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	September 14, 2021
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	January 30, 2020
Flight Time:	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

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

Meteorological Information and Flight Plan

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

Airport Information

Airport:	Byrd's Backcountry Airstrip 51AR	**Runway Surface Type:**	
Airport Elevation:	800 ft msl	**Runway Surface Condition:**	Dry
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	35.6785,-93.7286(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Nathan Bradshaw; Federal Aviation Administration - Little Rock FSDO; Little Rock, AR
Original Publish Date:	June 22, 2022
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=103968