



Aviation Investigation Final Report

Location:	Rand, Colorado	Accident Number:	CEN20CA277
Date & Time:	July 12, 2020, 08:30 Local	Registration:	N702KS
Aircraft:	Kitfox KITFOX SPORT	Aircraft Damage:	Substantial
Defining Event:	Loss of lift	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that during the flight he noticed the oil pressure gauge fluctuating and executed a precautionary landing to a road to examine the engine. He stated that after landing, he performed a walk around inspection of the airplane, which included looking for leaks and checking the oil level and security of the oil cap. Finding no anomalies, he proceeded to take off from the road. During takeoff and while the airplane was gaining airspeed in ground effect, the departure path went over a terrain depression and into a down sloping bowl; the airplane encountered a sudden sink/down flow of air and lost about 10-15 ft of altitude. The pilot attempted to turn toward lower terrain while maintaining airspeed but the sink/down flow of air continued and so he maneuvered to land the airplane in a meadow. Unable to reach the meadow, he turned the airplane into sloping terrain to minimize the impact energy. During the impact, the airplane sustained damage to both wings, the fuselage, and empennage.

The pilot reported that there were no mechanical failures or malfunctions, and noted that the fluctuating oil pressure gauge was likely due to the sending unit location on the engine and associated vibration or a loose ground connection.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The encounter with the downdrafts during the attempted takeoff, which resulted in decreased airplane's climb performance and subsequent impact with terrain.

Findings

Environmental issues	Downdraft - Effect on operation
Aircraft	Climb rate - Capability exceeded
Personnel issues	Identification/recognition - Pilot

Factual Information

History of Flight

Takeoff	Loss of lift (Defining event)
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Pilot Information

Certificate:	Private	Age:	56, 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:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	October 2, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 29, 2019
Flight Time:	475 hours (Total, all aircraft), 375 hours (Total, this make and model), 385 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 34 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Kitfox	Registration:	N702KS
Model/Series:	KITFOX SPORT No Series	Aircraft Category:	Airplane
Year of Manufacture:	2002	Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	SPO204001
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	July 14, 2019 Condition	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	783 Hrs at time of accident	Engine Manufacturer:	Rotax
ELT:	C91 installed, not activated	Engine Model/Series:	912ULS
Registered Owner:	On file	Rated Power:	100 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:	33V,8154 ft msl	Distance from Accident Site:	14 Nautical Miles
Observation Time:	15:35 Local	Direction from Accident Site:	340°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.38 inches Hg	Temperature/Dew Point:	21°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Granby, CO (GNB)	Type of Flight Plan Filed:	None
Destination:	Walden, CO (33V)	Type of Clearance:	None
Departure Time:	07:30 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	40.543334,-106.193885

Administrative Information

Investigator In Charge (IIC):	Brannen, John
Additional Participating Persons:	Leroy Sutton; FAA - Denver FSDO; Denver, CO
Original Publish Date:	May 6, 2021
Last Revision Date:	
Investigation Class:	Class 4
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=101585

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