



Aviation Investigation Final Report

Location:	Elko, Nevada	Accident Number:	WPR23LA233
Date & Time:	June 16, 2023, 15:02 Local	Registration:	N8223A
Aircraft:	Cessna 170B	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot of the tailwheel-equipped airplane reported that the winds at the airport were light and variable each of the three times he checked before takeoff. He performed a three-point takeoff, and as soon as he applied back pressure to the yoke, he observed a dust devil to the right and in front of the airplane. The airplane rolled aggressively left and he applied corrective control inputs as the airplane drifted to the left side of the runway. The main gear impacted vegetation, the airplane rolled, and came to rest inverted. The airplane sustained substantial damage to the wings and fuselage.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation. A review of the Federal Aviation Administration Aviation (FAA) Weather Handbook (FAA-H-8083-28) and the FAA Aeronautical Information Manual found no detailed information listed about dust devils or the potential hazards of flying through dust devils.

Probable Cause and Findings

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

The pilot's loss of control after encountering a dust devil during takeoff.

Findings

Environmental issues	Dust devil/whirlwind - Contributed to outcome
Aircraft	Directional control - Attain/maintain not possible

Factual Information

History of Flight

Takeoff	Other weather encounter
Takeoff	Loss of control in flight (Defining event)

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor; Military; Private	Age:	37, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	February 8, 2023
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	February 8, 2023
Flight Time:	4638 hours (Total, all aircraft), 11 hours (Total, this make and model), 1806 hours (Pilot In Command, all aircraft), 105 hours (Last 90 days, all aircraft), 52 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N8223A
Model/Series:	170B	Aircraft Category:	Airplane
Year of Manufacture:	1952	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	25075
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	May 15, 2023 Annual	Certified Max Gross Wt.:	2200 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4580 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	C91 installed, not activated	Engine Model/Series:	O-300D
Registered Owner:	On file	Rated Power:	145 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:	KBAM,4532 ft msl	Distance from Accident Site:	59 Nautical Miles
Observation Time:	15:15 Local	Direction from Accident Site:	250°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	3 knots / 14 knots	Turbulence Type Forecast/Actual:	None /
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.12 inches Hg	Temperature/Dew Point:	25°C / 0°C
Precipitation and Obscuration:			
Departure Point:	Elko, NV (ELK)	Type of Flight Plan Filed:	None
Destination:	Weiser, ID (S87)	Type of Clearance:	None
Departure Time:	15:02 Local	Type of Airspace:	Class G

Airport Information

Airport:	Elko Regional Airport EKO	Runway Surface Type:	Asphalt
Airport Elevation:	5140 ft msl	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	None
Runway Length/Width:	3015 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	40.824999,-115.79133

Administrative Information

Investigator In Charge (IIC):	Blum, Contessa
Additional Participating Persons:	Ryan Branch; Reno FSDO; Reno, NV
Original Publish Date:	October 26, 2023
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=192407

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](#).