Aviation Investigation Final Report

Location:	Hutchinson, Kansas	**Accident Number:**	CEN21LA208
Date & Time:	May 1, 2021, 09:25 Local	**Registration:**	N2378Z
Aircraft:	Beech 23	**Aircraft Damage:**	Substantial
Defining Event:	Aerodynamic stall/spin	**Injuries:**	2 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that during takeoff on the 4,012-ft-long runway, the airplane seemed to accelerate slowly and use a greater amount of runway than normal. After liftoff, the airplane would not accelerate and climbed very slowly. The pilot turned the airplane toward the right, and it began to lose altitude. The airspeed decreased, and the airplane stalled about 20 to 30 ft above the ground. The airplane then impacted the ground.

Postaccident examination of the airplane and engine did not reveal any mechanical anomalies that would have precluded normal operation. Takeoff performance data from the airplane's flight manual showed that the airplane should have been about 50 ft above the ground when it was 2,281 ft down the runway. Given the length of the runway, the pilot had the opportunity to safely abort the takeoff when he realized that the airplane was not accelerating normally and not achieving its expected takeoff performance. However, the pilot continued the takeoff and likely raised the nose of the airplane to a high pitch and high drag attitude in an attempt to gain altitude. The high pitch attitude placed the airplane close to the critical angle of attack, and when the airplane entered a turn, it experienced an aerodynamic stall and descended to ground impact.

Probable Cause and Findings

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

The pilot's failure to abort the takeoff and his high pitch attitude after takeoff, which resulted in an exceedance of the critical angle of attack and a subsequent aerodynamic stall.

Findings

Aircraft	Climb rate - Not attained/maintained
Personnel issues	Lack of action - Pilot
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Initial climb	Aerodynamic stall/spin (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On May 1, 2021, at 0925 central daylight time, a Beech 23, N2378Z, was involved in an accident near Hutchinson, Kansas. The airplane sustained substantial damage. The pilot and a passenger received minor injuries, and two passengers were uninjured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to the pilot, the purpose of the flight was to take two children for a ride as part of the Experimental Aircraft Association's (EAA) Young Eagles program. The pilot stated that during takeoff on the 4,012-ft-long runway 17, the airplane seemed to accelerate slowly and use a greater amount of runway than normal. He rotated the airplane at 70 mph, and after liftoff, the airplane would not accelerate beyond 75 mph and climbed very slowly. The pilot turned the airplane toward the right, and the airplane began to descend. The airspeed decreased, and the airplane stalled about 20 to 30 ft above the ground. The airplane then impacted the ground resulting in substantial damage to the left wing.

Postaccident examination of the airplane and engine did not reveal any mechanical anomalies that would have precluded normal operation.

The pilot calculated that the takeoff weight of the airplane was 2,296 lbs. According to the airplane flight manual, at a takeoff weight of 2,300 lbs, a pressure altitude of 2,000 ft, a head wind of 0 knots, and an outside air temperature of 70° F, the ground roll and total takeoff distance to attain a 50 ft height were 1,316 ft and 2,281 ft, respectively.

According to the EAA website, the EAA's Young Eagles program was launched in 1992 and provides young people free introductory flights to introduce and inspire children in the world of aviation. The pilots participating in the Young Eagles program are local chapter members of EAA, who volunteer their time and aircraft. According to the EAA website, each pilot is licensed by the FAA (or a governing organization outside of the United States, such as Transport Canada), and all aircraft are likewise licensed by the government. The flights are conducted according to federal regulations. No aerobatic maneuvers are to be performed. The program is designed to use existing FAA oversight and requirements appropriate to a general aviation privately owned aircraft operation.

Pilot Information

Certificate:	Private	**Age:**	63,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Lap only
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	BasicMed	**Last FAA Medical Exam:**	November 13, 2020
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	December 28, 2020
Flight Time:	184 hours (Total, all aircraft), 52 hours (Total, this make and model), 86 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N2378Z
Model/Series:	23	**Aircraft Category:**	Airplane
Year of Manufacture:	1962	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	M-102
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	2300 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O320-DB2
Registered Owner:	Pilot	**Rated Power:**	
Operator:	Pilot	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	HUT,1543 ft msl	**Distance from Accident Site:**	0.5 Nautical Miles
Observation Time:	09:52 Local	**Direction from Accident Site:**	360°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	13 knots /	**Turbulence Type Forecast/Actual:**	None /
Wind Direction:	190°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.01 inches Hg	**Temperature/Dew Point:**	18°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hutchinson, KS	**Type of Flight Plan Filed:**	None
Destination:	Hutchinson, KS	**Type of Clearance:**	VFR
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	Hutchinson Regional Airport HUT	**Runway Surface Type:**	Concrete
Airport Elevation:	1543 ft msl	**Runway Surface Condition:**	
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	4012 ft / 75 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor, 2 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	2 Minor, 2 None	**Latitude, Longitude:**	38.066155,-97.86049(est)

Administrative Information

Investigator In Charge (IIC):	Gallo, Mitchell
Additional Participating Persons:	Mark Hopp; Federal Aviation Administration; ICT FSDO; Wichta, KS
Original Publish Date:	July 20, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=103030