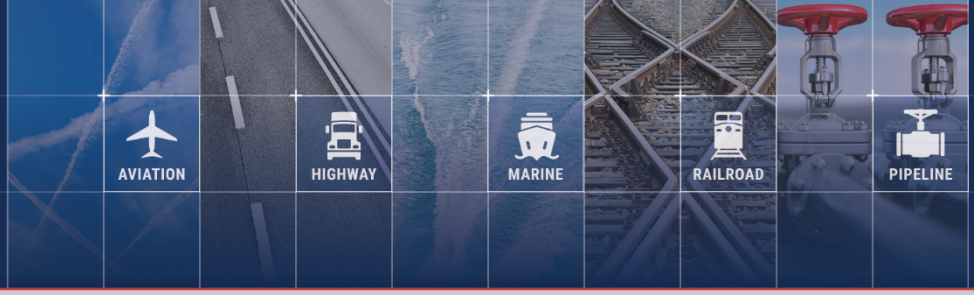

Aviation Investigation Final Report

Location:	AMANA, Iowa	**Accident Number:**	CHI97LA288
Date & Time:	September 6, 1997, 19:00 Local	**Registration:**	N5729V
Aircraft:	Beech 35-C33A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

In his written statement, the pilot said that during the airplane's takeoff run, 'I realized I wasn't getting flying speed and altitude - power was lacking. Because I was already halfway down this short grass airport, I pulled power, shut off switches, and kept the aircraft straight ahead.' Subsequently, the airplane went through a fence and came to rest in a field beyond the end of the runway. Examination of the airplane revealed no anomaly. According the airplane's Pilot Operating Handbook, at maximum gross weight (3,300 lbs), the airplane would have required a takeoff distance of about 1,700 feet to clear a 50-foot obstacle. The runway was 2800 feet in length.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper planning/decision. The fence (location) was a related factor.

Findings

Occurrence #1: OVERRUN
Phase of Operation: TAKEOFF - ABORTED

Findings
1. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - ABORTED

Findings
2. (F) OBJECT - FENCE

Factual Information

On September 6, 1997, at 1900 central daylight time (cdt), a Beech 35-C33A, N5729V, operated by a private pilot, sustained substantial damage when on initial takeoff, the airplane failed to gain altitude. The pilot subsequently landed the airplane in a bean field off of the departure end of the runway where it struck several fence posts and impacted the terrain. Visual meteorological conditions prevailed at the time of the accident. The personal flight was being conducted under 14 CFR Part 91. An IFR flight plan was on file. There were no reported injuries to the pilot or the three passengers on board. The cross-country flight originated at Amana, Iowa, at 1900 cdt, and was en route to Des Moines, Iowa.

In his written statement, the pilot said that during the airplane's takeoff run, "I realized I wasn't getting flying speed and altitude - power was lacking. Because I was already halfway down this short grass airport, I pulled power, shut off switches, and kept the aircraft straight ahead."

A passenger, seated in the airplane's right front seat, said in his written statement that the takeoff roll began without incident. "I was checking the Des Moines VOR when I felt us hit the runway." The passenger said that the airplane "hit a second and possibly third time. When I looked up, I saw the foliage ahead and felt [the pilot] pull the power. We came in flat and twisted to the right."

The Federal Aviation Administration (FAA) inspector who examined the airplane at the accident site, found the airplane resting upright in a bean field approximately 192 feet from the departure end of the runway. Ground scars were observed at the departure end of the runway going 10-degrees left of the runway centerline. The airplane's line of travel took it through a wire fence before entering the bean field. A five-inch diameter pole was resting on the ground off of the departure end of the runway. A five- inch wide dent was observed in the leading edge of the airplane's left wing at mid-span. There was a three-inch wide hole in the trailing edge of the left wing, just forward of the flap and three feet outboard of the wing root. The fuel drain on the left wing tank was broken off. The left main landing gear was bent outward. The airplane's right wing tip tank was broken off of the airplane, crushed and shattered into several pieces. The wing structure at the fracture was bent upward and aft. The right main landing gear had collapsed upward. The nose gear was broken off and found resting approximately 30 feet aft of the airplane. The right horizontal stabilizer and elevator were crushed aft and bent upward at the tips. All three propeller blades were bent aft approximately 90 degrees at mid-span. Flight control continuity was confirmed. Examination of the engine, engine controls and other airplane systems revealed no anomalies.

According to the Beech Debonair C33A Pilot's Operating Handbook, Takeoff Distance Performance table, an airplane weighing 3,300 pounds (maximum gross weight of the airplane), taking off with a pressure altitude of 1,700 feet mean sea level, an outside air

temperature of 70-degrees Fahrenheit, and a 6 knot headwind, will have a takeoff distance of approximately 1,000 feet. The takeoff distance necessary to clear a 50-foot obstacle would be approximately 1,700 feet.

Pilot Information

Certificate:	Private	**Age:**	59,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	July 1, 1976
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	4800 hours (Total, all aircraft), 800 hours (Total, this make and model), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N5729V
Model/Series:	35-C33A 35-C33A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	CE-26
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	February 21, 1997 Annual	**Certified Max Gross Wt.:**	3050 lbs
Time Since Last Inspection:	116 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2415 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed	**Engine Model/Series:**	IO-520
Registered Owner:	TEA, INC.	**Rated Power:**	285 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	CID ,864 ft msl	**Distance from Accident Site:**	11 Nautical Miles
Observation Time:	18:52 Local	**Direction from Accident Site:**	50°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	210°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	21°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(C11)	**Type of Flight Plan Filed:**	IFR
Destination:	DES MOINES , IA (DSM)	**Type of Clearance:**	IFR
Departure Time:	19:00 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	AMANA C11	**Runway Surface Type:**	Grass/turf
Airport Elevation:	718 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	28	**IFR Approach:**	None
Runway Length/Width:	2800 ft / 75 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	41.799465,-91.86061(est)

Administrative Information

Investigator In Charge (IIC):	Bowling, David
Additional Participating Persons:	JOSEPH QUIRING; DES MOINES , IA
Original Publish Date:	January 30, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=10698