



Aviation Investigation Final Report

Location:	WILMOT, Wisconsin	Accident Number:	CHI96LA288
Date & Time:	August 10, 1996, 11:00 Local	Registration:	N1823Q
Aircraft:	Beech 23	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

A certified flight instructor (CFI) was demonstrating a soft field landing and takeoff to a student pilot. After landing, they back-taxed to the approach end of the 1,480 foot turf runway and initiated a takeoff. After lift-off near the departure end, the airplane hit bushes and would not maintain a positive rate of climb. It then settled into trees and crashed. Using the pilot operating handbook, the ground run on a paved runway was calculated to be 1,276 feet. To clear a 50 foot obstacle after taking off from a paved runway, the required distance was calculated to be 2,211 feet.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: improper planning/decision by the flight instructor (CFI) by failing to ensure that the airplane would be able to clear brush and trees near the departure end of the runway.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - GRASS
2. SOFT FIELD TAKEOFF/PROCEDURE - PERFORMED - PILOT IN COMMAND
3. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
4. TERRAIN CONDITION - HIGH VEGETATION

5. (C) ALTITUDE/CLEARANCE - NOT ATTAINED - PILOT IN COMMAND

6. OBJECT - TREE(S)

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: TAKEOFF

Factual Information

On August 10, 1996, at 1100 central daylight time (cdt), a Beech BE-23, N1823Q, piloted by an airline transport rated flight instructor acting as pilot-in-command during a dual instructional flight, was destroyed when it collided with trees shortly after liftoff from runway 14 (1,480' x 40' dry turf) at the Westosha Airport, Wilmot, Wisconsin. The instructor and student pilot reported no injuries. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 flight was not operating on a flight plan. The flight departed Wilmot, Wisconsin, at 1059 cdt.

According to the certified flight instructor's (CFI) written statement, he and the student pilot were performing approach turn stall maneuvers and inflight emergency procedures. The student pilot was on her last check out flight for her private pilot's license. He decided to show the student pilot a soft field landing and takeoff at Westosha Airport. The student pilot made the landing, but on departure, "...the plane would not maintain a positive rate of climb and settled into the trees."

According to the student pilot's written statement, she had just made the landing to runway 14, at Westosha Airport and back taxied to the approach end of runway 14. The CFI said he would demonstrate a soft field takeoff. The student pilot stated, "...give full power, we ran the full length of the runway. The airplane had hardly become airborne. We clipped the high bushes at the runway, couldn't maintain altitude..."

The IIC calculated the takeoff ground run using the Beechcraft Musketeer A23,A23A Pilot Operating Handbook, at 2,350 pounds with level dry paved surface, 10 knots of headwind to be 1,276 feet. To clear a 50 foot obstacle, it was calculated to be 2,211 feet.

Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	46,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	July 16, 1996
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	4672 hours (Total, all aircraft), 250 hours (Total, this make and model), 4112 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 55 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N1823Q
Model/Series:	23 23	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2328
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	May 30, 1996 Annual	Certified Max Gross Wt.:	2450 lbs
Time Since Last Inspection:	14 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1826 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-360-A4K
Registered Owner:	SCHELM, SUSAN	Rated Power:	180 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:	JVL ,808 ft msl	Distance from Accident Site:	37 Nautical Miles
Observation Time:	11:00 Local	Direction from Accident Site:	100°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	Visibility	15 miles
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(WI10)	Type of Flight Plan Filed:	None
Destination:	(WI10)	Type of Clearance:	None
Departure Time:	11:00 Local	Type of Airspace:	Class D

Airport Information

Airport:	WESTOSHA WI10	Runway Surface Type:	Grass/turf
Airport Elevation:	850 ft msl	Runway Surface Condition:	Dry
Runway Used:	14	IFR Approach:	None
Runway Length/Width:	1480 ft / 40 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	42.500972,-88.179039(est)

Administrative Information

Investigator In Charge (IIC): Carlson, Todd

Additional Participating Persons: TIM R DERNER; MILWAUKEE , WI

Original Publish Date: December 23, 1996

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=10354>

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