Aviation Investigation Final Report

Location:	HOUGHTON, Michigan	**Accident Number:**	CHI93LA291
Date & Time:	July 28, 1993, 01:17 Local	**Registration:**	N4518S
Aircraft:	BEECH A-36	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT AND INSTRUMENT INSTRUCTOR PASSENGER DEPARTED HARTFORD, CONNECTICUT EARLIER IN THE DAY WITH A STOP IN SAGINAW, MICHIGAN, FOR FUEL. THE FINAL LEG OF THE FLIGHT WAS TO THE MINNEAPOLIS, MINNESOTA, AREA ON AN IFR FLIGHT PLAN. DURING THIS FLIGHT THE PILOT REQUESTED A DEVIATION TO HOUGHTON, MICHIGAN, DUE TO DETERIORATING WEATHER AHEAD. THE DEVIATION WAS GRANTED AND ATC PROVIDED THE PILOT HOUGHTON AIRPORT'S WEATHER INCLUDING THE ALTIMETER SETTING. THE PILOT DID NOT REPEAT THE ALTIMETER SETTING. DURING THE APPROACH THE PILOT ELECTED TO GO AROUND BECAUSE HE HAD REACHED A PERSONALLY ESTABLISHED DECISION HEIGHT. THE AIRPLANE COLLIDED WITH TREES AND TERRAIN SHORTLY AFTER THE PILOT APPLIED POWER AND PITCH INPUTS. THE ON-SCENE INVESTIGATION REVEALED THE AIRPLANE'S ALTIMETER WAS SET TO 29.98' HG., THE AIRPORT'S ALTIMETER SETTING WAS 29.75' HG. AS PROVIDED BY ATC. THE 0113 WEATHER OBSERVATION FROM HOUGHTON CONTAINED AN ALTIMETER SETTING OF 29.73' HG.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot-in-command not following instrument procedures by not using the correct altimeter setting as issued by Air Traffic Control.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MISSED APPROACH (IFR)

Findings
1. OBJECT - TREE(S)
2. (C) IFR PROCEDURE - NOT FOLLOWED - PILOT IN COMMAND
3. (C) ALTIMETER SETTING - NOT CORRECTED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On July 28, 1993, at 0117 eastern daylight time (EDT), a Beech A- 36, N4518S, registered to Randy E. Bickmann of Spring Park, Minnesota, and piloted by an instrument rated private pilot, was destroyed during a collision with trees and terrain while executing an ILS approach to Runway 31 at the Hancock/Houghton County Memorial Airport, Houghton, Michigan. Instrument meteorological conditions prevailed at the time of the accident. The personal 14 CFR Part 91 flight was operating on an IFR flight plan. The two occupants received serious injuries. The flight departed from Saginaw, Michigan, at 0057 EDT.

While enroute, the pilot of N4518S asked the FAA's Minneapolis Air Route Traffic Control Center's (ARTCC) controller for weather information because his airplane's "...storm scope is ah lighting up pretty bad out here." At the conclusion of the conversation the pilot stated he was going direct to Marquette, Michigan, from his present position. As the flight progressed toward Marquette, the pilot called the ARTCC and stated: "Ah look the way the storm scope is painting up here ah we're gonna ah go into Houghton put her down in Houghton for the night."

N4518S was cleared to the Houghton airport and told to descend to 3,100 feet mean sea level (MSL). After confirming the descent altitude, ARTCC gave the pilot the Houghton airport weather report that included the airport's altimeter setting of 29.75 in. HG. The pilot's response did not include a repeat of the altimeter setting. Before this radio transmission, the pilot had been given three altimeter settings while enroute. In each instance the pilot repeated the altimeter setting.

At 0105 EDT ARTCC advised the pilot that radar contact was lost and a "...change to advisory frequency approved if you can't raise me I'm going to have you cancel with Flight Service on one two three-point six." The pilot of N4518S acknowledged ARTCC's transmission. No further radio transmissions were heard from N4518S. During an interview with the pilot he stated he recalled making a go-around during the approach. He said he did not have the auto-pilot engaged and that the landing gear and flaps were extended. He said he decided to go around because the airport was not in sight. The pilot was asked at what altitude he decided to initiate the go-around maneuver. He stated regularly uses a 300-foot decision height on ILS approaches he flies. The decision height for the ILS approach at the Houghton airport is 200 feet above ground level (AGL).

The pilot rated passenger on the accident airplane possessed a commercial pilot certificate with an instrument instructor rating. This individual stated the airplane was on the ILS approach when it encountered a strong downdraft about 500 to 600 feet AGL, just as the middle marker was becoming audible. He stated the full power applied by the pilot did not stop the descent. The Houghton County Sheriff's Department Incident Report confirms the passenger's statement regarding encountering a down draft while on final approach. The

report also states the passenger recalled a descent rate of 500 FPM while on the approach.

During a second interview, the passenger stated the pilot initiated a missed approach. He stated the pilot applied elevator back pressure just before colliding with the trees. The passenger was asked if the pilot uses the auto-pilot. He stated he rarely used it. He stated the pilot is very smooth and has shown a very good instrument scan pattern regularly.

N4518S collided with trees and terrain approximately 1/2 mile east-southeast of Hancock/Houghton County Memorial Airport's Runway 31 approach threshold.

N4518S's altimeter was observed to have a setting of 29.98. The airplane's radios were not set to the accident airport's radio frequency. Recorded weather information for the Houghton County Airport showed an altimeter setting of 29.73 in. HG. during the approximate time frame N4518S crashed.

Investigation into the previous 24 hours of pilot and airplane activity revealed the airplane was refueled with 49.1 gallons of AVGAS on July 26, 1993. N4518S departed Hartford, Connecticut, on July 27, 1993. The pilot purchased two quarts of oil on July 27, 1993. During the evening of July 27, 1993, N4518S stopped at Saginaw, Michigan for refueling. The airplane received 57.0 gallons of AVGAS before departing. Copies of the receipts are appended to this report. N4518S's actual departure time and route from Hartford, Connecticut, was not determined.

Pilot Information

Certificate:	Private	**Age:**	42,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	December 18, 1992
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	663 hours (Total, all aircraft), 564 hours (Pilot In Command, all aircraft), 9 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	**Registration:**	N4518S
Model/Series:	A-36 A-36	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	E-717
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	CONTINENTAL
ELT:		**Engine Model/Series:**	IO-520
Registered Owner:	RANDY E. BICKMANN	**Rated Power:**	280 Horsepower
Operator:	RANDY E. BICKMANN	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Night/dark
Observation Facility, Elevation:	CMX ,1095 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	01:13 Local	**Direction from Accident Site:**	280°
Lowest Cloud Condition:	Unknown / 100 ft AGL	**Visibility**	0.38 miles
Lowest Ceiling:	Overcast / 100 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	90°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	SAGINAW , MI (SAG)	**Type of Flight Plan Filed:**	IFR
Destination:	MINNEAPOLIS , MN (MIC)	**Type of Clearance:**	IFR
Departure Time:	00:57 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	HANCOCK/HOUGHTON MEMORIAL CMX	**Runway Surface Type:**	Asphalt
Airport Elevation:	1095 ft msl	**Runway Surface Condition:**	
Runway Used:	31	**IFR Approach:**	ILS
Runway Length/Width:	6500 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	2 Serious	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	47.110374,-88.559982(est)

Administrative Information

Investigator In Charge (IIC):	Gattolin, Frank
Additional Participating Persons:	WOODY BEST; GRAND RAPIDS , MI RON FARWIG; GRAND RAPIDS , MI
Original Publish Date:	July 25, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=9259

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