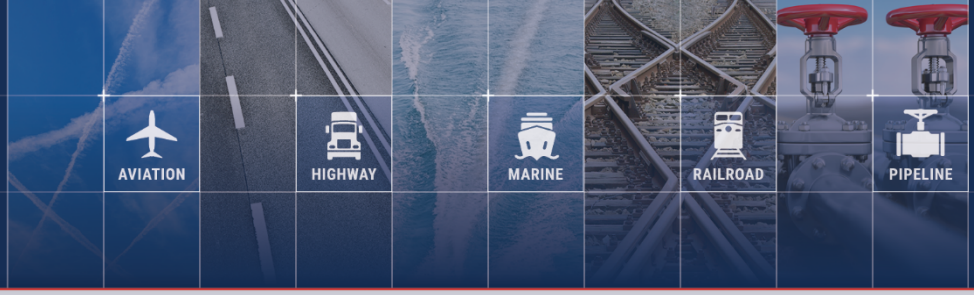

Aviation Investigation Factual Report

Location:	HASTINGS, Nebraska	**Accident Number:**	CHI98LA072
Date & Time:	December 23, 1997, 23:00 Local	**Registration:**	N9WG
Aircraft:	Piper PA-30/A	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal, 1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

History of Flight

On December 23, 1997 at 2300 central standard time (cst), a Piper PA-30/A, N9WG, sustained substantial damage when it impacted the terrain about 1/2 mile from the Hastings Airport, Hastings, Nebraska. The private pilot with an instrument rating had executed a missed approach and was making a second approach when it impacted the terrain. The pilot received fatal injuries. One passenger received minor injuries and one passenger received no injuries. The 14 CFR Part 91 flight had departed the Cheyenne Airport, Cheyenne, Wyoming, en route to Hastings, Nebraska. Instrument meteorological conditions prevailed and an instrument flight plan had been filed.

The right seat passenger reported the pilot had departed Nampa, Idaho, at about 0830 mountain standard time (mst) on December 23, 1998, with Mountain Home, Idaho, as a stopover airport, and Hastings, Nebraska, as the intended final destination airport. The direct distance between Nampa, Idaho, and Hastings, Nebraska was about 584 nautical miles.

The pilot departed Nampa, Idaho, at about 0830 mst and flew approximately 35 nautical miles to Mountain Home, Idaho, where the airplane received maintenance to the aircraft's cabin heater system. Due to maintenance complications, the flight did not depart Mountain Home until about 1500 mst.

The right seat passenger reported that as the airplane neared Cheyenne, Wyoming, the pilot became concerned about weather conditions at Hastings, Nebraska. As a precaution, the pilot landed at Cheyenne, Wyoming, at about 1830 mst to fuel the airplane and check weather.

The pilot called the Federal Aviation Administration's (FAA) Denver Automated Flight Service Station (AFSS). He received a weather brief and filed an IFR flight plan to Hastings, Nebraska.

At 1905 mst, the pilot was briefed that the current automated weather at Hastings indicated winds at 120 degrees at 4 knots, one quarter mile visibility, freezing fog, 200 foot ceiling, 3,600 foot overcast, and temperature at minus 2 degrees Celsius (C), and the dew point at minus 2 degrees C.

At 1907 mst, 1907 mst, the pilot was briefed that the current forecast up until the 2200 cst forecast called for winds at 150 degrees, 400 foot overcast, visibility occasionally 2 miles. The 2200 cst forecast weather at Hastings called for winds at 120 degrees at 6 knots, ceiling one thousand overcast, occasional visibility four miles in mist with 500 foot overcast.

At 1908 mst, the pilot was briefed that the current weather at North Platte, Nebraska, indicated

calm winds, visibility 10 miles, 7,500 foot broken ceiling, 9,000 overcast, temperature minus one degree C, and dewpoint minus 7 degrees C. The briefer reported the forecast weather was basically the same as the current weather.

At 1909 mst, the pilot filed a IFR flight plan to Hastings, Nebraska. He indicated that North Platte, Nebraska, would be used as an alternate airport. The pilot reported that he had 4. 75 hours of fuel on board, with an en route time of two hours and an airspeed of 170 knots.

The pilot departed Cheyenne, Wyoming, about 1940 mst.

At 2224 cst, the pilot contacted Minneapolis Center and requested the weather at Grand Island, Nebraska, which was 20 miles north of Hastings, Nebraska. The controller reported the surface observation taken at 2156 cst indicated winds at 130 at 5 knots, visibility less that one quarter mile, freezing fog, 100 foot indefinite ceiling, temperature minus 2 degrees C, dew point minus 2 degrees C, and altimeter 29.88.

The controller briefed the pilot that the 2201 special surface observation at Hastings indicated winds at 080 degrees at 4 knots, one quarter mile visibility, freezing fog, a few clouds at 100 feet, 4,200 foot overcast, temperature minus 2 degrees C, dew point minus 2 degrees C, and altimeter 29.87.

At 2227, the pilot reported to Minneapolis Center, "Whiskey golf, we're gonna shoot an approach into Hastings, ah, if it's no good we'll, ah, do a missed and go somewhere else."

At 2227, the pilot requested and received clearance to fly the Hastings VOR 14 approach.

At 2237, the pilot reported to Minneapolis Center, "Currently four miles out, ah....(I'll) fly over the VOR and then do the published approach."

At 2244, the pilot requested a current altimeter setting for Hastings. Minneapolis Center reported the altimeter was 29.87.

At 2250, the pilot reported to Minneapolis Center, "ah, Missed approach. I (wanna) try it again."

At 2250, Minneapolis Center cleared N9WG for the VOR 14 approach.

At 2250, the pilot acknowledged that he was cleared for the approach.

There were no further radio transmissions from N9WG.

At about 2300 cst, the aircraft impacted an irrigation tower and wheel assembly that was located about 1/2 mile west of the airport. The airplane went under the irrigation pipe on top of the tower and impacted the ground. The airplane came to rest inverted about 493 feet south of the irrigation tower.

The right seat passenger was able to get out of the airplane and obtain assistance.

Hastings Fire Department personnel reported that heavy ground fog existed during their search effort.

The pilot received serious injuries and was transported to a hospital where he was later pronounced dead at 0527 cst on December 24, 1997.

Personnel Information

The pilot was a private pilot with single and multi-engine land ratings, and an instrument rating. He held a third class medical certificate. He had a total of about 1,153 hours of flight time. 821 hours were in multi-engine aircraft with about 93 hours in make and model. He had a total of about 215 hours of night flying.

Aircraft Information

The airplane was a twin engine Piper PA-30/A, serial number 30-1099. The airplane seated six and had a gross weight of 3,600 pounds. The engines were 160 horsepower Lycoming IO-320-C1A engines. The last annual inspection was conducted on September 19, 1997. The airplane had flown 31 hours since the last inspection and had a total of 5,156 hours.

The airplane underwent maintenance on December 23, 1997, at a maintenance facility at Mountain Home, Idaho. The cabin air heater system was repaired. The passenger reported that the heater worked properly after the maintenance was conducted.

A review of the aircraft logbooks indicated that the last time the altimeter was removed and certified in accordance with FAR Part 43, appendix E, was on April 26, 1995. The regulation required the altimeter to be checked every two years.

Meteorological Conditions

The Hastings special automated report at 2201 cst indicated winds at 080 degrees at 4 knots, visibility 1/4 mile in freezing fog, sky condition a few clouds at 100 feet, ceiling overcast at 4,200 feet, temperature minus 2 degrees C, dew point minus 2 degrees C, altimeter 29.87.

The Hastings 2253 cst automated report indicated winds at 100 degrees at 4 knots, visibility 1/4 mile in freezing fog, a few clouds at 100 feet, ceiling overcast at 3,800 feet, temperature and dew point minus 2 degrees C, altimeter 29.86. Remarks sea level pressure 1013.1 millibars, synoptic temperature minus 1.7 degrees C, dew point minus 1.7 degrees C.

The Hastings special automated report at 2344 cst indicated winds at 080 degrees at 6 knots, visibility 1/4 mile in freezing fog, a few clouds at 100 feet, ceiling overcast at 2,900 feet,

temperature and dew point minus 2 C, altimeter 28.83.

Aids to Navigation

The Hastings (HSI) VOR 14 approach plate indicated the field elevation was 1,961 feet msl. The approach plate depicted a procedure turn that was initiated at the HEARN intersection of the R-086 radial from the Kearny (EAR) VOR and the R-331 radial from the HSI VOR. The final approach fix (FAF) was located at HEARN intersection at 3,500 feet msl and 5.2 nautical miles from the HSI VOR. The final approach inbound course was 151 degrees. The minimum descent altitude (MDA) was 2,360 feet msl. The MDA was 399 feet above the airport.

The FAA performed a Flight Inspection Report on the Hastings VOR 14 approach on December 26, 1997. The facility performance was found to be satisfactory.

Wreckage and Impact Information

The airplane wreckage was located about 1/2 mile west of the Hastings Airport. The aircraft impacted an irrigation tower and wheel assembly on a heading of about 175 degrees. The airplane went under the irrigation pipe on top of the tower and impacted the ground. The right wing impacted the irrigation tower assembly and separated about mid-span. It was found about 73 feet from the irrigation tower. The right engine separated from the right wing and was found about 431 feet along the wreckage path. The main wreckage was found inverted on a westerly heading about 493 feet along the wreckage path.

The left engine remained attached to the left wing. One blade of the left propeller was bent aft approximately 20 to 30 degrees at the mid-span and twisted slightly in the direction of rotation with leading edge and chordwise scratches. The second blade was bent aft slightly at the tip.

The right propeller had separated from the right engine. One blade was broken at approximately the 2/3 span. The deice boot was partially separated with leading edge nicks and scratches. The other blade was broken at approximately the 2/3 span, and displayed heavy leading edge impact with twisting in the direction of rotation. The outboard portions of both blades were not recovered.

The altimeter at the scene read 61,220 feet altitude. The altimeter was set at 29.84. An examination of the altimeter revealed it was broken and unreliable due to impact forces.

The airplane had an estimated 2.25 hours of fuel remaining at the time of the accident. A witness reported smelling fuel at the accident site.

Medical and Pathological Information

An autopsy was performed on the pilot at the Pathology Medical Services in Lincoln, Nebraska.

A Forensic Toxicology Fatal Accident Report was prepared by the FAA Civil Aeromedical Institute. The report indicated the following results:

No Carboxyhemoglobin detected in the blood.

No Cyanide detected in the blood.

No Ethanol detected in urine.

1.7 (ug/ml, ug/g) Lidocaine detected in blood.

12.8 (ug/ml, ug/g) Lidocaine detected in urine.

The presence of Lidocaine was consistent with normal emergency medical procedures.

Tests and Research

The Garmin GPS 55 was examined. The unit contained four user defined way points but did not contain any stored routes. The unit when last turned off was not actively navigating a flight plan.

Additional Information

The right seat passenger reported she remembered that the pilot flew the second approach down to 2,300 feet or 2,350 feet on the altimeter and started to pull up on the airplane's yoke. She reported the airplane impacted the ground immediately after the pull up on the yoke. She reported the pilot had not indicated that there was anything wrong with the airplane, and that he did not seem worried or upset during the approach.

Parties to the investigation included the Federal Aviation Administration and the New Piper Aircraft, Inc.

The aircraft wreckage was released to Howe Associated, Inc., Wichita, Kansas.

Pilot Information

Certificate:	Private	**Age:**	40,Male
Airplane Rating(s):	Single-engine land; 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:**	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	July 17, 1997
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1153 hours (Total, all aircraft), 93 hours (Total, this make and model), 1067 hours (Pilot In Command, all aircraft), 19 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N9WG
Model/Series:	PA-30/A PA-30/A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	30-1099
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	September 19, 1997 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	31 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	5156 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed	**Engine Model/Series:**	IO-320-C1A
Registered Owner:	T. C. BUNDY	**Rated Power:**	160 Horsepower
Operator:		**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:	HSI ,1961 ft msl	**Distance from Accident Site:**	
Observation Time:	22:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Thin Overcast / 100 ft AGL	**Visibility**	0.25 miles
Lowest Ceiling:	Overcast / 3800 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	100°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	-1°C / -1°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	CHEYENNE (CYS)	**Type of Flight Plan Filed:**	IFR
Destination:	(HSI)	**Type of Clearance:**	IFR
Departure Time:	21:44 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	HASTINGS MUNICIPAL HSI	**Runway Surface Type:**	
Airport Elevation:	1961 ft msl	**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	VOR
Runway Length/Width:		**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Minor, 1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Minor, 1 None	**Latitude, Longitude:**	40.580936,-98.389862(est)

Administrative Information

Investigator In Charge (IIC):	Silliman, Jim
Additional Participating Persons:	ED CARTER; LINCOLN , NE MICHAEL MCCLURE; ARLINGTON , TX
Report Date:	November 25, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=10813