Aviation Investigation Final Report

Location:	POMEROY, Washington	**Accident Number:**	SEA96FA133
Date & Time:	June 20, 1996, 18:58 Local	**Registration:**	N57514
Aircraft:	Bellanca 8KCAB	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses observed the aircraft overfly the pilot's east-west turf landing strip traveling westbound at an estimated height of 50 feet above the runway in straight and level flight. The witnesses reported having seen the pilot arrive and overfly his airstrip in a similar fashion on previous occasions. The closest witness reported observing the aircraft 'passing the east end of the runway' and entering 'a steep climb' and then banking 'to the left in a steep diving turn' after which 'it leveled out and began a climb after a 270 degree turn.' The witness also reported that 'the only difference (he) noticed between this occasion and the many times (he) had seen this plane land in the past was the turn seemed to be tighter.' The aircraft impacted 25 degree upsloping terrain approximately 50 feet below the rim level at which his airstrip was situated. One propeller blade displayed 'S' bending deformation while the opposing blade displayed tip curl.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain adequate clearance with the surrounding terrain while maneuvering to land. A factor was the rising terrain conditions.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Findings
1. (F) TERRAIN CONDITION - RISING
2. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On June 20, 1996, approximately 1858 hours Pacific daylight time, a Bellanca 8KCAB, N57514, registered to and being flown by a commercial pilot, was destroyed when it collided with terrain while maneuvering to reverse course for a landing at Pomeroy, Washington. The pilot was fatally injured and a post crash fire consumed the aircraft. Visual meteorological conditions existed and no flight plan had been filed. The flight, which was personal, was to have been operated under 14CFR91, and originated from Pasco, Washington.

Several witnesses observed the aircraft immediately prior to the accident. Two witnesses reported seeing the aircraft overfly the pilot/owner's airstrip in an easterly direction. One of these witnesses estimated the aircraft's height above the airstrip as "about 50 feet" and the other reported the aircraft as flying "straight and level." Both witnesses reported that the engine sounded normal and reported seeing this aircraft arrive and overfly the airstrip in a similar fashion on previous occasions. One of the witnesses reported observing a trail of "bluish colored smoke" coming from the right wing inboard area. The other witness reported seeing no smoke trail. The witness located closer to the accident site reported observing the aircraft "passing the east end of the runway" (refer to CHART) and entering "a steep climb" and then banking "to the left in a steep diving turn" after which it "leveled out and began to climb after a 270 degree turn." The witness then lost sight of the aircraft and "in seconds heard a loud thump and saw smoke rising immediately afterward." He also reported that "the only difference that I noticed between this occasion and the many times I had seen this plane land in the past was the turn seemed to be tighter" (refer to attached statements).

PERSONNEL INFORMATION

Three personal flight logs were obtained from the pilot's residence and examined. The first log was opened on March 19, 1972, and closed on September 28, 1989. The second log was opened on October 01, 1989, and closed on June 25, 1993. The third log was opened on June 30, 1993, and the last entry was dated April 11, 1994. There was no known record of any flights subsequent to the April 11, 1994, entry. The pilot reported a total of 2500 hours of flight time at his most recent FAA medical examination (February 28, 1996).

The pilot's total flight time of approximately 1,468 hours was based upon these log entries, and the most recent entry of a biannual flight review was entered into the third logbook and dated January 15, 1994.

The logs showed the pilot as having accrued approximately 257 hours in the 8KCAB (all in the accident aircraft) by the April 11, 1994 date.

AIRCRAFT INFORMATION

The aircraft's airframe, powerplant and propeller logs were reviewed. All three logs showed the most current inspection as having been an annual conducted on 03/01/93, at an aircraft total time of 1004 hours since the aircraft's certification on 07/05/73. The amount of time accrued on the engine/airframe between the date of the accident and the 03/01/93 inspection was not known.

Documentation found with the aircraft logs showed the application of an FAA form 337 (Major repair and alteration), dated 12/16/80, for the installation of a single injector smoke system. This system was designed to inject a stream of "Corray 22" oil into the exhaust manifold tube near its outboard end to create a smoke trail during flight when desired by the pilot.

METEOROLOGICAL INFORMATION

Winds at several locations throughout the area were reported as calm to light as reported below:

TIME:	LOCATION:	RANGE/BRG FM SITE:	WINDS:
1855PDT	Pullman, WA	25 nautical miles NE	calm
1856PDT	Lewiston, ID	23 nautical miles SE	020 degrees at 6 knots
1851PDT	Walla Walla, WA	37 nautical miles SW	220 degrees at 7 knots

WRECKAGE AND IMPACT INFORMATION

The aircraft impacted moderately upsloping terrain approximately 50 feet below the rim of a broad plateau (refer to photograph 01). The latitude and longitude of the accident site was 46 degrees 28.28 minutes north and 117 degrees 34.12 minutes west respectively at an elevation of approximately 2,300 feet above sea level. The slope of the terrain at the impact site was +25 degrees. The impact site was located less then 1,000 feet southeast of the east end of a turf runway used by the pilot. The runway was oriented east/west (refer to CHART I and photograph 02).

The aircraft was observed at the crash site with the nose oriented upslope and the lateral axis approximately 290/110 degrees magnetic (left wing east). Most of the aircraft had been involved in a fire with the exception of the aft, outboard portion of the left wing (refer to photographs 03 and 04). The longitudinal axis of the aircraft was oriented along an approximate 041 degree magnetic bearing (refer to photograph 05) with the nose directed southwest.

The aircraft's empennage displayed minimal deformation to its tubular structure (refer to photograph 06). The left wing was partially burned and fragments of red navigation lens were observed on the ground several inches from the left navigation light retaining socket (refer to

photograph 07). The right wing was heavily fire damaged (refer to photograph 08).

The propeller remained attached to the engine. One blade displayed extensive aftward tip curl while the opposing blade displayed approximately 30 degrees of forward bending deformation (refer to photograph 09).

There was no distribution of wreckage across the terrain and all aircraft components were located within close proximity of the ground impact site. There was no evidence of any control discontinuity with the aircraft's flight control systems.

MEDICAL AND PATHOLOGICAL INFORMATION

Post mortem examination of the pilot was conducted by Karl T. Koenen, M.D., at Pathologist's Regional Laboratory, 1225 Highland Avenue, Lewiston, Idaho, 99403, on 06/21/96. Toxicological evaluation of samples from the pilot was conducted by the FAA's Toxicology and Accident Research Laboratory. All results were negative (refer to attached toxicology report).

ADDITIONAL INFORMATION

On site examination of the wreckage was conducted on the afternoon of 06/21/96 after which the wreckage was verbally released to the pilot's brother. Written wreckage release was obtained on 07/09/96 and was documented on NTSB Form 6120.15 (attached).

Pilot Information

Certificate:	Commercial	**Age:**	43,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	February 26, 1996
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	1468 hours (Total, all aircraft), 256 hours (Total, this make and model), 1401 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bellanca	**Registration:**	N57514
Model/Series:	8KCAB 8KCAB	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	96-73
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	March 1, 1993 Annual	**Certified Max Gross Wt.:**	1800 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Installed	**Engine Model/Series:**	IO-320-E1A
Registered Owner:	HOWELL, MERLE, D.	**Rated Power:**	150 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:	PUW ,2551 ft msl	**Distance from Accident Site:**	25 Nautical Miles
Observation Time:	18:55 Local	**Direction from Accident Site:**	30°
Lowest Cloud Condition:	Scattered / 9000 ft AGL	**Visibility**	20 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	21°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	PASCO , WA	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	00:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	46.440086,-117.540466(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, Steven
Additional Participating Persons:	
Original Publish Date:	February 2, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42277