Aviation Investigation Final Report

Location:	ST. GEORGE, Utah	**Accident Number:**	SEA94LA119
Date & Time:	May 17, 1994, 09:55 Local	**Registration:**	N224FH
Aircraft:	HALLSTROM BD-5B	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT DEPARTED FROM RWY 16 ON THE EXPERIMENTAL AIRCRAFT'S FIRST FLIGHT, AND REMAINED LOW AND CLOSE IN THE PATTERN. THE ENGINE WAS HEARD RUNNING ROUGH ON DOWNWIND. WHILE TURNING BASE THE ENGINE LOST POWER, AND THE PILOT ATTEMPTED TO CONTINUE HIS APPROACH RADIOING '... I'M GOING TO TRY TO MAKE IT.' THE AIRPLANE IMPACTED UPSLOPING TERRAIN APPROX 1000 FT SHORT OF THE RUNWAY. THE PILOT'S FLIGHT LOG REFLECTED A TOTAL OF APPROX 2 HRS FLIGHT TIME IN THE PRECEDING 4 YRS. EXAMINATION OF THE ENGINE REVEALED THAT THE LEFT CARBURETOR FUEL/AIR MIXTURE SCREW WAS MISADJUSTED, AND THAT THE RIGHT CARBURETOR SLOW IDLE JET WAS PLUGGED WITH SAND.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: CARBURETOR CONTAMINATION AND LOW OUTPUT, AND THE PILOT'S IMPROPER DECISION TO ATTEMPT TO CONTINUE THE APPROACH. A FACTOR WAS THE PILOT'S LACK OF RECENT FLIGHT EXPERIENCE.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings

1. (C) FUEL SYSTEM,CARBURETOR - CONTAMINATION
2. (C) FUEL SYSTEM,CARBURETOR - OUTPUT LOW

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings
3. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
4. (F) LACK OF RECENT EXPERIENCE - PILOT IN COMMAND

Factual Information

On May 17, 1994, approximately 0955 hours mountain daylight time (mdt), a Hallstrom BD-5B homebuilt aircraft, N224FH, registered to and being flown by Floyd P. Hallstrom, a certificated commercial pilot, crashed on approach to runway 17 at the St. George Municipal Airport, St. George, Utah. The aircraft was destroyed during the ground impact and post crash fire, and the pilot was fatally injured. Visual meteorological conditions existed at the time, and no flight plan had been filed. The flight, which was personal in nature, was to have been conducted in accordance with 14CFR91, and originated from the St. George airport approximately 0950.

According to witnesses, and the absence of any logged flight time in the BD-5B aircraft within the pilot's flight log, the accident flight was the first flight for the aircraft.

Witnesses reported the aircraft departing on runway 16, turning downwind, and remaining low within the pattern. One witness reported that the engine was running rough on the downwind. All witnesses agreed hearing a loss/reduction of power during the base turn to runway 16.

One witness, who was monitoring the airport UNICOM frequency on a hand held transceiver, reported that "after he rolled out on final he made a call "BD5 I've lost power - I'm going to try to make it"."

The aircraft impacted rapidly rising terrain approximately 1000 feet south of the threshold of runway 16 and at an elevation below the runway (refer to photographs).

PERSONNEL INFORMATION

Pilot Hallstrom's fourth logbook was reviewed and a total flight time of 1166 hours was recorded as of May 3, 1994. The last completed page contained the following information:

DATE: ACFT: TOT: DUAL: REMARKS: 02-24-90 C170A 1.5 0.0 T/O & LDGS (3 @ SGU & 6 @ 1L8) 02-27-90 C170A 1.0 0.0 T/O & LDGS (1 @ SGU & 1 @ 1L8) 03-03-91 C170A 0.3 0.3 T/O & LDGS 02-17-94 PA-28 1.0 0.7 T/O & LDGS 05-03-94 AA-5 0.7 BFR & CHECKOUT GRUMMAN AA5 AEROWEST ARTHUR G. JONES CFII MEL #1748219

AIRCRAFT INFORMATION

The aircraft's logbook was reviewed. The latest entry was logged on May 5, 1994. This and all previous entries consisted of engine runs and taxi tests, but no actual flight time.

The logbook entry for March 20, 1994, read "Eng (sic) cut out four of the six runs? Running very

rich?"

On the last page of the aircraft log which contained entries, a piece of scrap paper was found paperclipped. The paper had a listing of ten items of which the tenth read "Reset carb jet needle to #1 position both carb. Carb. running very rich. 3-26-94." This item had been lined out.

AIRPORT INFORMATION

The St. George Municipal Airport is situated atop a bluff several hundred feet above the surrounding terrain and with steeply upsloping terrain at the approach ends of both runways.

MEDICAL AND PATHOLOGICAL INFORMATION

Post mortem examination was conducted by Edward A. Leis, M.D., on May 18, 1994, at the facilities of the Office of the Medical Examiner, 48 North Medical Drive, Salt Lake City, UT 84113. The cause of death was reported as "blunt force injuries."

Toxicological evaluation of samples from the pilot was completed by the FAA's Toxicology and Accident Research Laboratory and were negative with the exception of "salicylate detected in Urine" (refer to attached Toxicology report).

TESTS AND RESEARCH

The BMW R90S engine and twin Dellorto carburetors were disassembled and examined under the control of FAA Inspector Brent A. Robinson, at Hatz's Custom Cycle, on May 18, 1994. The left carburetor air\fuel mixture screw was found to be turned out 1.5 turns, which, according to the owner of the cycle shop, was the expected bench test setting. However, the owner advised Inspector Robinson that at the elevation of the St. George airport, an adjustment of 2.5 turns would be normal. The right carburetor air\fuel mixture screw was found to be turned out 2.25 turns. However, the slow idle jet was observed to be plugged with sand (refer to Engine Teardown Report of Inspector Robinson).

ADDITIONAL INFORMATION

On site investigation was conducted by FAA Inspector Brent Robinson. The wreckage was released by Inspector Robinson to Richard Newcomb (refer to Inspector Statement). The aircraft logbook and pilot log #4 were returned via certified mail to Mrs. Hallstrom on October 26, 1994.

Pilot Information

Certificate:	Commercial	**Age:**	73,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	June 4, 1993
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1166 hours (Total, all aircraft), 1000 hours (Pilot In Command, all aircraft), 2 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HALLSTROM	**Registration:**	N224FH
Model/Series:	BD-5B BD-5B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	2248
Landing Gear Type:	Retractable - Tricycle	**Seats:**	1
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	800 lbs
Time Since Last Inspection:	0 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	BMW R-R
ELT:	Not installed	**Engine Model/Series:**	R90S
Registered Owner:	HALLSTROM, FLOYD, P.	**Rated Power:**	
Operator:	HALLSTROM, FLOYD P.	**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:	SGU ,2938 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	10:00 Local	**Direction from Accident Site:**	160°
Lowest Cloud Condition:	Scattered / 1700 ft AGL	**Visibility**	10 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:**	16°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	09:50 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	ST. GEORGE MUNI SGU	**Runway Surface Type:**	
Airport Elevation:	2938 ft msl	**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	1 Fatal	**Latitude, Longitude:**	37.180156,-113.600028(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, Steven
Additional Participating Persons:	FLOYD LANDON; SALT LAKE CITY , UT
Original Publish Date:	January 18, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=41925