Aviation Investigation Final Report

Location:	SEATTLE, Washington	**Accident Number:**	SEA96FA201
Date & Time:	August 23, 1996, 19:03 Local	**Registration:**	N567SF
Aircraft:	Beech D50	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot's 1st flight in the Beech D50 was on the day of the accident. He made a local flight, then before departing on a cross-country flight to Seattle, he stated to a mechanic that he was unfamiliar with the aircraft's panel, but would familiarize himself with it during flight. Radio and radar data indicate that when the pilot contacted Seattle Approach Control, he was uncertain of his position. He was given vectors to Boeing Field, the destination. Although he was unfamiliar with Boeing Field, he reported that he had the runway and landing traffic in sight: however, he continued on toward the Seattle-Tacoma International Airport (Sea-Tac). The controller gave the pilot headings away from Sea-Tac. The pilot acknowledged the controller's instructions, but continued to fly directly toward Sea-Tac. After the controller gave urgent instructions to turn away from Sea-Tac, the pilot responded that an engine had lost power. Witnesses reported the aircraft made a shallow right turn toward an airport parking lot and was traveling slow with the landing gear extended. Subsequently, the aircraft collided with a light post and tops of trees near Sea-Tac, then it crashed and was further damaged by ground fire. Although some hydraulic tappet spalling and exhaust valve erosion was found in the left engine, no mechanical failure of either engine was found. Performance data showed the Beech D50 was capable of sustaining level flight or climbing with one propeller feathered and the landing gear retracted.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of the pilot to follow proper emergency procedures (properly configure the airplane and feather the appropriate propeller) after loosing power in one engine, which resulted in his inability to maintain altitude until reaching an airport. Factors relating to the accident were: the loss of engine power in one engine for undetermined reason(s), the pilot's lack of experience in

the make and model of airplane, his lack of recent flying experience, and his lack of familiarity with the geographic area.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: APPROACH

Findings
1. 1 ENGINE
2. (F) REASON FOR OCCURRENCE UNDETERMINED

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

Findings
3. PRECAUTIONARY LANDING - INITIATED - PILOT IN COMMAND
4. (C) EMERGENCY PROCEDURE - NOT FOLLOWED - PILOT IN COMMAND
5. (C) PROPELLER FEATHERING - NOT PERFORMED - PILOT IN COMMAND
6. (F) LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - PILOT IN COMMAND
7. (F) LACK OF RECENT EXPERIENCE - PILOT IN COMMAND
8. (F) LACK OF FAMILIARITY WITH GEOGRAPHIC AREA - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH

Findings
9. OBJECT - POLE
10. OBJECT - TREE(S)

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On August 23, 1996, at 1903 Pacific daylight time, a Beech D-50 Twin Bonanza, N567SF, operated by and registered to the pilot as a 14 CFR Part 91 personal flight, experienced a loss of engine power and collided with a light pole and subsequently the terrain near the parking garage at the Seattle-Tacoma International Airport, Seattle, Washington. Visual meteorological conditions prevailed at the time and no flight plan was filed. The airplane was substantially damaged and the private pilot was seriously injured. The passenger was fatally injured. The flight had departed from Coeur d'Alene, Idaho, approximately two hours prior to the accident.

The pilot reported during an interview approximately two weeks after the accident, that he did not recall any of the events leading up to the accident, except for a vague memory of the first contact with Seattle approach control near Paine Field, Everett, Washington. The pilot reported that the purpose of the flight was to attend a Seattle ball game.

The pilot reported that prior to departing to Seattle, he flew the airplane earlier in the day to practice touch-and-go landings at Coeur d'Alene. The mechanic who worked on the airplane reported that he was in his hangar while the pilot was practicing the touch-and-go-landings. He stated that he had the local Coeur d'Alene airport radio frequency turned on and overheard a transmission from a flight instructor, who was holding short of the runway, state "N567SF you're landing with the gear-up." The mechanic then went outside and observed the airplane going around at about 30 feet with the landing gear retracted. When the pilot landed, the mechanic stated that the pilot came into the fixed base operation and bought a Seattle sectional chart. The mechanic told the pilot that maybe he should get some dual instruction as the pilot made a comment about not being able to find "things on the panel," and not being sure what "goes on and what goes off." When the pilot declined the suggestion, the mechanic then suggested that the pilot should sit in the airplane for a while and familiarize himself with the location of the items in the airplane. The pilot stated to the mechanic that he would have a good hour in flight to Seattle to do that. The mechanic then asked the pilot if everything was working okay in the airplane. The pilot responded that everything was working fine.

Witnesses near the accident site, who provided written statements, reported that the airplane was observed flying low and approaching the Seattle-Tacoma airport. Two pilots who were in an automobile by the traffic signal to the entrance to the airport, reported that they heard the reciprocating engine(s) of a low flying airplane. The pilots looked up and saw the Twin Bonanza directly over the intersection at approximately 150 feet above ground level. The pilots felt that the heading of the airplane at this point was about 300 degrees, and traveling "extremely slow" in a shallow 10 degree bank turn to the right. The landing gear was down and "very little flaps if any" were down. The pilots had a good view of the right engine and reported

that it appeared to be operating normally and was not feathered. The pilots did not see any smoke or fire coming from the airplane. They could not see the left engine due to the bank angle of the airplane. Shortly after the pilots first sighted the airplane, the airplane appeared to "stall" with the right wing down. The bank angle increased to approximately 40 to 45 degrees and the nose pitched down to 15 to 20 degrees. The airplane was lost from sight at this point. One of the pilots reported that from the time he first saw the airplane until he lost sight of it, he did not hear any change in the engine sound, which appeared to be just above idle. The pilot also stated that the engines definitely were not at maximum power. There was no sound that either engine was "cutting out."

Other witnesses located further away from the accident site reported that they heard the airplane and looked to see that it was flying low at about 100 feet and traveling to the south. The airplane was in a straight and level attitude, moving fast, with the engines sounding normal. The landing gear and flaps were up. As the airplane continued to the south and at about mid-field to the Seattle-Tacoma runways, a witness reported that the engines suddenly went silent. The airplane started a shallow turn to the right (west). Just before the witness lost sight of the airplane, he stated that "one or both engines fired-up, but made an unusual sound." The sound lasted for about two seconds before the witness lost sight of the airplane.

PERSONNEL INFORMATION

At the time of the accident, the pilot held a private pilot certificate, and was rated in single-engine land, multi-engine land and single-engine sea aircraft. The pilot's flight logbook indicates that he had accumulated a total flight time, in all aircraft, of 138 hours, with 76 hours as pilot-in-command. The pilot had accumulated a total flight time of 25 hours in multi-engine land airplanes, with 16 hours as pilot-in-command.

The flight logbook indicates that the pilot's first flight in a multi-engine land aircraft was on April 28, 1995, in a Cessna 310. Six dual instructional flights were logged from April 28, 1995, to May 21, 1995, that originated from Paine Field, Everett, Washington. Instructional maneuvers were logged in the book and practice landings were made to Bremerton, Washington, and Renton, Washington. On August 26, 1995 through September 16, 1995, seven dual instructional flights were logged originating from Felts Field, Spokane, Washington. Instructional maneuvers were logged in the Spokane area with practice landings made to Deer Park, Washington, and Coeur d'Alene, Idaho.

On September 19, 1995, the pilot did not satisfactorily pass the multi-engine flight test. On September 21, 1995, the pilot logged a dual instructional flight from Felts Field to Deer Park and returning to Felts Field. The maneuvers logged for this flight indicated "engine failure on takeoff and approach, touch-and-go, and go-around." On September 22, 1995, the logbook indicates that the pilot satisfactorily passed the multi-engine flight test in the Cessna 310.

From September 23, 1995 to November 26, 1995, the pilot logged eight flights in a Taylorcraft seaplane. There are no multi-engine flights logged since September 22, 1995, and no further

flights logged in any make/model aircraft after November 26, 1995. During an interview with the pilot, he stated that he did have one other flight in the Taylorcraft that wasn't logged, but did not recall the date of this flight.

On the day of the accident, the pilot reported that he flew the Beech D-50, for the first time as pilot-in-command, and performed touch-and-go landings at Coeur d'Alene before departing for Seattle.

AIRCRAFT INFORMATION

The maintenance logbooks indicate the last annual inspection, prior to the pilot purchasing the airplane on February 17, 1995, was performed on October 3, 1994. At this time, the engine logbooks indicate that for the right engine, the crankshaft, connecting rod bearings, the crankshaft bearings, and lifters were replaced. The camshaft was ground, the ignition harness was replaced, and the starter was rebuilt. The engine was reassembled and signed-off as airworthy. The left engine was inspected and signed-off as airworthy, with no major discrepancies noted.

The logbooks indicate that the oil was changed in both engines on January 24, 1995. This was the last logbook entry prior to the pilot purchasing the airplane.

After the pilot purchased the airplane, it was flown to Coeur d'Alene where it was to be based. During this flight, the pilot stated that the pilot-in-command of this flight had to feather the left propeller prior to landing, because "the governor disconnected and there was no propeller control."

On December 30, 1995, two hours and 36 minutes after the oil change, the engine logbook for the left engine indicates that the engine was removed "due to large chunks of metal in the engine oil." The oil sump was removed and the mechanic determined that the metal was from the magneto drive cushion housing. The entry indicates that the engine required an inspection and reassembly by an Inspection Authorized mechanic. The right magneto coil was also replaced in accordance with the applicable Airworthiness Directive. This entry was signed off by an airframe and powerplant mechanic.

The mechanic who eventually annualled the airplane reported that he recalls when the airplane was flown into Coeur d'Alene and witnessed the airplane landing with the left propeller feathered. The airplane sat on the ramp for several months before someone took the left engine off the airplane. The airplane sat all winter on the ramp until April when the airplane was towed to the mechanic's hangar. The left engine was in pieces in the back of a pick-up truck. The mechanic stated that the crankcase was not split and the cylinders were still on. All of the accessories had been removed.

On July 5, 1996, the engine logbooks indicate that the engines were signed-off for an "annual" inspection. The entry for the left engine indicates that a compression check was performed

with the lowest compression of 62/80 and 65/80 psi in cylinders #2 and #6. The engine was "flushed due to metal contamination." The accessory section gears and accessories, new generator drive shaft, new oil pump gears, new teflon oil/fuel hose and propeller with new bolts and o-rings, and new points and distributor block assembly in the magneto were installed. The vacuum pump was overhauled, and the spark plugs were cleaned and adjusted. The engine was re-installed on the airframe with new engine mounts. The engine was test run and signed-off as airworthy by an Inspection Authorized mechanic.

The right engine was inspected and signed-off as airworthy with no significant items noted.

At the time of the accident, approximately two hours and 36 minutes had been accumulated on the airplane since the annual.

COMMUNICATIONS

At 1617, on August 23, 1996, the pilot contacted the Boise, Idaho, Flight Service Station and requested a standard weather briefing, from Coeur d'Alene, Idaho, to Boeing Field, Seattle, Washington. The pilot reported that he intended to takeoff about 1630 hours and fly visual flight rules (VFR) direct to Boeing Field. The time en route was reported to be one hour and forty minutes. The specialist reported excellent VFR conditions and no weather advisories along the route of flight. The specialist reported the current weather conditions at Coeur d'Alene and at Seattle, and continued by reporting the winds aloft. The specialist asked the pilot if he wanted to file a flight plan and the pilot responded that he did not. The conversation was concluded at 1621.

At 1822, the pilot made contact with Seattle approach control and reported that he was forty miles to the east and that his destination was Boeing Field. The controller instructed the pilot to squawk a transponder code and inquired as to the pilot's location and altitude. The pilot responded that his altitude was 12,000 feet. The controller responded that he was not receiving the aircraft's transponder code and asked if the pilot was navigating off of the Seattle VOR. The pilot responded that he was not and stated "visual flight only." The controller instructed the pilot to remain VFR and outside of the Seattle bravo airspace until the pilot thought that he was 30 miles east of Seattle, then he would give the pilot flight following.

At 1835, the pilot contacted Seattle approach and stated that "believe we are thirty miles to the east." The controller responded that he was still not receiving the transponder code and asked the pilot what his current altitude was. The pilot responded that his altitude was 11,700 feet. The controller informed the pilot that if he did not pick the aircraft up on radar, he would be unable to provide flight following. The pilot was to remain VFR outside of the Seattle bravo airspace. The pilot responded that he would be descending and that "I'll need vectors towards Boeing Field." The controller responded that he would be unable to give the pilot vectors if he did not pick the airplane up on the radar.

At 1843, the controller informed the pilot that he was still not receiving the aircraft's

transponder code and asked the pilot if he knew what his position was. The pilot responded "approaching the sound and I see a lot of islands, but I can't verify my position." The controller instructed the pilot to "ident" and the pilot responded that he was "identing" his transponder. The controller then asked the pilot if his heading was 270 degrees or maybe 280 degrees. The pilot responded that his heading was 270 degrees. The controller then informed the pilot that he had the aircraft radar identified 16 miles northeast of Paine Field, Everett, Washington. The controller then asked the pilot to verify that his destination was Boeing. The pilot responded "roger." (see Radar Plot #1)

At 1844, the controller suggested that the pilot turn to a heading of 170 degrees and confirmed that the airplane's altitude was 8,700 feet. The controller then informed the pilot that he would point Boeing Field out to the pilot when he got closer.

The controller continued to give the pilot heading changes, information on his location relative to Boeing Field and traffic advisories. The controller continued to instruct the pilot to continue his descent and to remain in VFR conditions.

At 1854, the controller instructed the pilot to fly a heading of 130 degrees as the radar indicated that it looked like he was still flying 170 to 180 degrees. The pilot responded by saying 130. The controller then informed the pilot of traffic and the pilot responded by saying "seven sierra fox." (see Radar Plot #17)

At 1856, the controller notified the pilot that the Boeing airport was at the pilot's one o'clock position and six miles. The pilot responded that he had the airport in sight. The controller instructed the pilot to continue the VFR descent. The pilot responded that he was continuing to descend. (see Radar Plot #21)

At 1857, the approach controller contacted the local controller at Boeing tower and informed the Boeing controller that the Twin Bonanza was at the north end of Mercer and that "five six sierra foxtrot is lost, doesn't know what he's doing, he says he sees the airport." The controller at Boeing tower acknowledged this.

At 1857, the approach controller instructed the pilot to contact Boeing tower on 118.3. The pilot acknowledged 118.3.

At 1857, the pilot contacted Boeing tower and was instructed to make a right traffic to runway 31 left, and to report turning downwind. The pilot responded "(unintelligible) unfamiliar airport (unintelligible)." The controller instructed the pilot to turn right 30 degrees and asked the pilot if he saw the airport to his right. The pilot responded "roger." (see Radar Plot #23)

At 1858, the controller instructed the pilot to turn direct to the airport for right traffic and to expedite his descent "now" to 1,000 feet. The pilot responded, "expediting descent." The controller then reported to the pilot that he would be number two behind a Bonanza that was approaching a one-and-a-half mile final. The controller asked if the pilot had the traffic in

sight. The pilot responded that he would extend the downwind and that he did not have the traffic in sight. The controller then instructed the pilot to turn left 20 degrees. The pilot responded "20 degrees left turn."

At 1859, the controller instructed the pilot to turn left 30 degrees "now." The pilot responded to the thirty degree left turn. The controller then instructed the pilot that he now had a Gulfstream ahead and to his left that was approaching a three mile final. The controller asked the pilot if he had the traffic in sight and that he was going to be following the Gulfstream. The pilot stated that he would advise when he had the traffic in sight. (see Radar Plot #27)

At 1900, the controller instructed the pilot to turn left another 10 degrees and informed the pilot that he was a mile west of runway centerline and that he should see the Gulfstream on final. The pilot responded that he had the traffic. The controller informed the pilot that the Gulfstream was lined up for runway 31 left, and to follow that aircraft as the pilot needed to angle to the east to remain outside of Seattle class B airspace. The pilot responded "roger." (see Radar Plot #29). The controller then instructed the pilot to turn left "now" and suggested a heading of 90 degrees. The pilot responded "zero nine zero." The controller informed the pilot that the Seattle-Tacoma airport was off of his right wing and that the Seattle-Tacoma controllers were holding aircraft departures. The controller instructed the pilot to fly direct to the airport (Boeing) "now." The pilot did not respond and the controller again informed the pilot that the airport off of his right wing was Seattle-Tacoma and to begin a hard left turn "now" to zero niner zero. The pilot did not respond and the controller again informed the pilot that he was aiming for the wrong airport and to "go-around, go-around."

At 1901, the pilot responded "unable, I have an engine failure." (see Radar Plot #32)

WRECKAGE AND IMPACT INFORMATION

The wreckage was located in a grassy area near the entrance to the airport parking garages located to the east of the runways. From witness statements and evidence found at the accident site, it appeared that the airplane had been traveling in a northerly direction estimated at 350 degrees. The right wing tip collided with the top of an approximate 40-foot tall light pole. The metal cover of the light pole separated and was located at the base of the pole. Blue paint transfer was noted on the cover. After the collision with the light pole, the airplane continued in the northerly direction for about 48 feet and struck the top branches of a 20-foot tall tree. Approximately 80 feet from the light pole, three ground indentations were noted in the grass along the wreckage path. The first indentation represented the imprint of an engine spinner with three separate impact marks of the three propeller blades extending outward from the spinner. A propeller blade from the left engine was found in close proximity to this first imprint. The second imprint appeared to be from the nose of the airplane, and the third imprint appeared to be from the right engine, with only one long, thin indentation in the soil which appeared to be from one propeller blade. A 40 foot wide burnt area was present just beyond these imprints.

The airplane was located at the edge of this burn area, approximately 125 feet from the light pole. The airplane was positioned upright and appeared to have slid up against another 30 foot tall tree. The airplane was positioned on a magnetic heading of 10 degrees.

The left wing had been completely consumed by fire. The left engine remained in place, however, twisted and partially separated from its mounts. The engine displayed signs of heat distress. The left wing forward spar and some of the internal structure of the wing remained in place, however, severely burned. The outer skin was burned and melted away. The flight control cables were visible and in place. The left main landing gear tire was laying near the wing root.

The left side of the fuselage, back to the left horizontal stabilizer, was burned. The left horizontal stabilizer and elevator were intact and displayed thermal damage to the outer skin leading edge. The vertical stabilizer was intact, and the rudder remained attached to its hinges. The right horizontal stabilizer and elevator remained attached, however, it was bent upward nearly 90 degrees.

The right wing remained attached to the wing root. The right engine had partially separated upward and aft, and was laying upside down on top of the right wing. The right wing tip was bent upward approximately 45 degrees and displayed brown paint transfer along the underside of the wing tip that matched the paint color from the light cover. There was no fuel present in the auxiliary tank, however, the main tank contained approximately 40 gallons of fuel. The wing flap appeared to be in the retracted position. Both the wing flap and aileron remained attached at their hinges. The right main landing gear tire had separated and was positioned near the wing root.

Cockpit documentation made note that all of the engine controls were in the forward position. The fuel selectors were too badly damaged to determine their position. Documentation of the magneto switches revealed that the two left side switches were "on" and the two right side switches were "off."

Both engines were removed from the wings and examined. The right engine crankshaft rotated easily and gear and valve train continuity was established. Compression was developed in each cylinder. The spark plugs displayed normal operating signatures and the left magneto produced a spark from each lead via hand rotation. The right magneto displayed impact damage too severe to be capable of rotation. The carburetor sustained impact damage. The fuel strainer assembly (screen) appeared clean and free of contaminants. The engine driven fuel pump was found free to rotate. The oil suction and oil pressure screen assemblies were clean and free of contaminants. The vacuum pump rotated easily and was undamaged internally.

The right engine spinner was crushed rearward. All three propeller blades remained attached to the hub. The blades were bent and twisted rearward and displayed leading edge indentations and chordwise scratches.

The left engine exhibited heat distress. The front of the crankcase was cracked and the crankshaft could not be rotated. The bottom of the engine was crushed and the oil sump was fractured. The carburetor was destroyed. Both magnetos displayed external thermal damage. Both magnetos rotated, however, no spark was produced. The vacuum pump would not rotate by hand and was also thermally damaged. A borescope was used to look inside each cylinder. Black deposits, which appeared to be carbon deposits, were found inside the number three cylinder. The cylinders were removed from the crankcase and examined. Chunks of carbon deposits were noted in each cylinder. After the number two cylinder was removed, it was noted that the exhaust valve face displayed fragmented pieces missing from around the circumference.

The crankcase halves were separated. The hydraulic tappet bodies were examined and it was found that the number two exhaust hydraulic tappet body was badly spalled. The number six exhaust tappet body was starting to spall. The other tappet bodies were smooth.

Examination of the pistons revealed that the number six piston ring was separated in two sections. The remainder of the rings were intact.

The left crankcase half was found cracked through the forward camshaft bearing area from impact damage. It appeared that this damage was restricting camshaft rotation. The spark plugs displayed normal operating signatures.

The left propeller hub remained attached to the crankshaft and two of the three blades remained attached. The blades were bent rearward and displayed leading edge polishing and chordwise scratches. One blade had rotated 180 degrees in the hub, the other blade had rotated 90 degrees in the hub. The blade that separated appeared to have twisted in an aft direction from the tip to about mid-blade. Chordwise scratches were observed on both the leading and trailing edges. The spinner was compressed and fractured around the propeller hub area.

MEDICAL AND PATHOLOGICAL INFORMATION

Toxicological samples were sent to the Civil Aeromedical Institute for analysis. The results of the analysis were reported as negative.

ADDITIONAL DATA/ INFORMATION

The Beechcraft Model D50 Flight Handbook, Section 4 - Emergency Operation Procedures, states under the paragraph for single-engine flight that "The Twin Bonanza handles and performs well on one engine, with ample power for sustained flight and safe maneuvering." The Handbook indicates that the minimum safe single-engine speed for the Twin Bonanza is 90 mph.

At the time of the accident, if was determined that the airplane was under the maximum gross weight of 6,300 pounds. The temperature was reported as 75 degrees F, and the altimeter setting was 30.00" Hg. The field elevations for Boeing Field and Seattle-Tacoma International are 18 feet and 429 feet. The Single-Engine Rate of Climb performance chart represents the rate of climb in ft/min for an aircraft at maximum gross weight. The chart indicates that for the weather conditions at the time of the accident, the aircraft was capable of climbing between 240 and 260 ft/min, with the landing gear retracted and one propeller feathered. (see attached Single-Engine Rate of Climb Chart).

The wreckage was released to the pilot on October 28, 1996. The last known location of the wreckage was in a storage hangar located near Boeing Field, Seattle, Washington. Personnel from Rotor-Technics, Renton, Washington, recovered the wreckage.

At the date of this writing, the pilot had not returned either one of the two NTSB Pilot/Operator Aircraft Accident Report Form 6120.1/2's. One form was left with the pilot and his wife on September 9, 1996, during an interview. The second form, along with the NTSB Release of Aircraft Wreckage Form 6120.15 was mailed to the pilot on October 28, 1996. The Release of Aircraft Wreckage Form was signed and received at the NTSB Northwest Regional Office on November 5, 1996. The Pilot/Operator Aircraft Accident Report Form was not included.

Pilot Information

Certificate:	Private	**Age:**	41,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
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 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	August 30, 1994
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	138 hours (Total, all aircraft), 76 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N567SF
Model/Series:	D50 D50	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	DH-57
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	July 5, 1996 Annual	**Certified Max Gross Wt.:**	6300 lbs
Time Since Last Inspection:	3 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	7456 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	GO-480-G2D13
Registered Owner:	GREGORY R. RAINEY	**Rated Power:**	295 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:	BFI ,18 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	18:55 Local	**Direction from Accident Site:**	335°
Lowest Cloud Condition:	Clear	**Visibility**	60 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	290°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	24°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	COEUR D'ALENE , ID (COE)	**Type of Flight Plan Filed:**	None
Destination:	(BFI)	**Type of Clearance:**	VFR
Departure Time:	16:30 Local	**Type of Airspace:**	Class B

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Serious	**Latitude, Longitude:**	47.439071,-122.279121(est)

Administrative Information

Investigator In Charge (IIC):	Eckrote, Debra
Additional Participating Persons:	DEBORAH COX; RENTON , WA BRENT MORROW; RENTON , WA JEFFERY R POSCHWATTA; KENT , WA TOM CAMPAGNOLA; WICHITA , KS
Original Publish Date:	August 21, 1997
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42288