Aviation Investigation Final Report

Location:	Grafton, West Virginia	**Accident Number:**	NYC01LA070
Date & Time:	January 22, 2001, 16:30 Local	**Registration:**	N911N
Aircraft:	Whittman Tailwind DN-1	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Ferry		

Analysis

Prior to the day of the accident, the pilot had not flown the make and model accident airplane. He "topped off" the 24-gallon fuel tank with 21.5 gallons of fuel. The pilot then performed two takeoffs and landings to familiarize himself with the airplane. The familiarization flight lasted about 20 minutes, and then the pilot let the engine idle on the ground for approximately 20 minutes, before he departed about 1400 on a cross country flight. "About" 1630, a witness observed a blue and white airplane circling a lake about 200-300 feet above the ground. The witness heard the engine noise cease, return, and cease again. The airplane then disappeared from sight, and the wreckage was located 5 days later. It was about 1.5 miles from the lake, and 100 miles east of the destination airport. During examination of the wreckage, an FAA inspector did not find any fuel in the tanks or carburetor. He did find about 1/4 ounce of fuel in the fuel bowl. The inspector also found a piece of paper in the wreckage that revealed the pilot planned the flight to be 2 hours and 30 minutes, at 150 knots. However, the previous owner and a witness stated the airplane cruised about 110-120 knots. According to the engine manufacturer, the engine consumed about 7.2 gallons of fuel per hour at 75% cruise performance. Review of the data revealed that at performance cruise, for 3 hours and 15 minutes, the engine would consume approximately 23.4 gallons of fuel. Although the autopsy report indicated that the pilot died from the rupture of a pre-existing abdominal aortic aneurysm, evidence observed by rescue personnel suggested that the pilot initially survived the impact and attempted to activate the ELT and egress the airplane. Inspection of the ELT and maintenance records revealed that the batteries had been removed 6 days prior to the accident flight, and the entry "ELT removed for repairs this date" was made in the airframe logbook.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper preflight planning, which resulted in fuel exhaustion. A factor was the pilot's lack of familiarity with the airplane.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: MANEUVERING

Findings
1. (C) FLUID,FUEL - EXHAUSTION
2. (C) PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND
3. (F) LACK OF FAMILIARITY WITH AIRCRAFT - PILOT IN COMMAND
4. MISC EQPT/FURNISHINGS,SURVIVAL EQUIPMENT - INOPERATIVE

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

Factual Information

On January 22, 2001, about 1630 eastern standard time, a Whittman Tailwind DN-1 homebuilt airplane, N911N, was substantially damaged while maneuvering near Grafton, West Virginia. The certificated commercial pilot was fatally injured. Visual meteorological conditions prevailed for the flight that departed Allaire Airport (BLM), Belmar, New Jersey; destined for Mason County Airport (3I2), Point Pleasant, West Virginia. No flight plan was filed for the ferry flight conducted under 14 CFR Part 91.

Prior to the day of the accident, the pilot had not flown the make and model accident airplane. According to the operator of the airplane, the pilot "topped off" the 24-gallon fuel tank with 21.5 gallons of 100LL. The pilot then performed two takeoffs and landings, to familiarize himself with the airplane. The two takeoffs and landings took about 20 minutes. He then let the airplane engine idle on the ground, for about 20 minutes, while he prepared for his cross-country flight. The pilot departed about 1400 for the flight to 3I2, with the intention of delivering the airplane to a new owner.

A witness, who was piloting a different airplane, intended to follow the accident pilot to 3I2. The witness stated that once airborne, the accident airplane flew slower than the accident pilot had planned. The witness had to reduce his airspeed from 140 knots to "about" 120 knots to stay with the accident airplane. About 5-10 miles past Garret County Airport (2G4), Oakland, Maryland, the witness lost sight of the accident airplane. He assumed that the accident airplane had landed at 2G4 to refuel. The witness landed at Clarksburg, West Virginia, refueled, and proceeded uneventfully to 3I2.

Another witness, who lived near Rock Lake, West Virginia, stated that he observed a blue and white airplane circling the lake about 200-300 feet agl, "about" 1630. He heard the engine noise cease, then the airplane banked right, and the engine noise returned. The airplane gradually began to climb, but then the engine noise ceased for a second time, and the airplane disappeared from sight.

The wreckage was located on January 27, 2001, in a wooded area about 1.5 miles southeast of Rock Lake. According to the Deputy Chief of the Windfield, West Virginia Fire Department, bloody handprints were present on the overhead cockpit panel, pilot-side door, and emergency location transmitter (ELT) case. There was no evidence the pilot was wearing a shoulder harness, but his lap belt was unfastened and exhibited a bloody handprint on the fastener. The Deputy Chief further stated that the evidence was consistent with the pilot initially surviving the accident, unfastening his seatbelt, and attempting to active the ELT and egress the airplane.

The wreckage was examined by a Federal Aviation Administration inspector. The inspector was able to rotate the propeller by hand, and confirm crankshaft and camshaft continuity. He

noted that the fuel tank was not compromised during the impact, and appeared absent of fuel. Additionally, the inspector did not find fuel in the fuel lines or carburetor. He did observe approximately 1/4 inch of fuel at the bottom of the fuel bowl. When the wreckage was recovered; the inspector instructed the salvage crew to invert it, in an attempt to drain fuel from the tank, but no fuel flowed from the tank.

The inspector added that the accident site was approximately 100 nautical miles east of 3I2, and the airplane's emergency locator transmitter (ELT) did not have a battery installed. Review of the airframe logbook revealed an entry dated January 16, 2001; "ELT removed for repairs this date..."

The prior owner stated he performed the most recent annual inspection on the accident airplane, on January 16, 2001. Prior to the inspection, the airplane was in storage for about 1 year. The owner added that the ELT did not transmit during testing for the annual inspection; therefore, he made the logbook entry. Additionally, the owner stated that the accident airplane cruised about 110 knots.

A paper found in the wreckage revealed that the accident pilot had planned the flight to be 2 hours and 30 minutes, at 150 knots.

According to the engine manufacturer, the make and model accident engine consumed 7.2 gallons of fuel per hour during performance cruise (75% rated). Review of the data revealed that at performance cruise, for 3 hours and 15 minutes, the engine would consume approximately 23.4 gallons of fuel.

An autopsy of the pilot was performed by the Office of the Chief Medical Examiner, West Virginia. The autopsy report indicated that the pilot died from the rupture of a pre-existing abdominal aortic aneurysm. However, the medical examiner could not positively confirm that the rupture of the aneurysm occurred after the impact.

Toxicological testing was conducted at the FAA toxicology Accident research Laboratory, Oklahoma City, Oklahoma. According to the toxicology report:

"0.238 (ug/ml, ug/g) MORPHINE detected in Urine." Review of the medical records by the Safety Board's Medical Officer could not positively confirm if the pilot had taken morphine before of after the accident. According to the pilot's brother, the pilot was taking prescription medication. However, the brother did not know what medication the pilot was taking, nor did he know what the pilot's ailments were.

Pilot Information

Certificate:	Commercial	**Age:**	68,Male
Airplane Rating(s):	Single-engine land; 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 2 With waivers/limitations	**Last FAA Medical Exam:**	January 13, 1999
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	15000 hours (Total, all aircraft), 0 hours (Total, this make and model), 50 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Whittman Tailwind	**Registration:**	N911N
Model/Series:	DN-1	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	92
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	January 16, 2001 Annual	**Certified Max Gross Wt.:**	1465 lbs
Time Since Last Inspection:	3.32 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	789.52 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-290
Registered Owner:	Eastwind Aviaton	**Rated Power:**	135 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	CKB,1217 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	16:53 Local	**Direction from Accident Site:**	240°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	210°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.13 inches Hg	**Temperature/Dew Point:**	2°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Belmar, NJ (BLM)	**Type of Flight Plan Filed:**	None
Destination:	Point Pleasant, WV (3I2)	**Type of Clearance:**	None
Departure Time:	14:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Mason County Airport 3I2	**Runway Surface Type:**	
Airport Elevation:	643 ft msl	**Runway Surface Condition:**	Unknown
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	39.340557,-80.014442

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Edwin Shields; FAA FSDO-09; Charleston, WV
Original Publish Date:	October 24, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=51395