Aviation Investigation Final Report

Location:	Knox City, Missouri	**Accident Number:**	CHI07LA115
Date & Time:	April 23, 2007, 15:35 Local	**Registration:**	N40SW
Aircraft:	Bird Seawind 3000	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses reported seeing and hearing the airplane prior to its impact with the terrain. Several of these witnesses reported hearing the engine "sputtering" or "popping." A post crash fire engulfed the airplane, consuming all but the forward four feet of the fuselage. Control system integrity could not be conclusively determined; however, no evidence of a pre-impact failure was found. The engine was able to be rotated but damage from the post crash fire precluded determination as to the reason for the presumed loss of engine power. The terrain where the accident occurred was rising with vegetation about 8 to 12 inches tall. The ground scars and aircraft damage indicate that the bulkhead located just aft of the nose landing gear dug in during the forced landing resulting in the airplane nosing over.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power for an undetermined reason. Contributing to the accident was the unsuitable terrain that was encountered by the pilot during the forced landing.

Findings

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

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED

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

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

Findings
2. (F) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - ENCOUNTERED - PILOT IN COMMAND

Occurrence #4: NOSE OVER
Phase of Operation: EMERGENCY DESCENT/LANDING

Factual Information

HISTORY OF FLIGHT

On April 23, 2007, about 1535 central daylight time, an amateur-built Bird Seawind 3000, N40SW, piloted by a private pilot, was destroyed by impact forces and a post-crash fire near Knox City, Missouri. The Title 14 Code of Federal Regulations Part 91 personal flight was operating in visual meteorological conditions without a flight plan. The pilot and one passenger received fatal injuries and one passenger received serious injuries. The flight originated from Winter Haven, Florida, and was en route to Willmar, Minnesota, when the accident occurred. Fueling records indicated that an intermediate stop was made in Malden, Missouri, where 45.9 gallons of fuel were added to the airplane's fuel tanks. The exact time of departure from Malden was not determined.

Witnesses reported seeing and hearing the airplane shortly before the accident. Several of these witnesses reported that the engine was "sputtering", or "popping" as the airplane flew overhead.

PERSONNEL INFORMATION

The pilot, age 64 years, held a private pilot certificate with airplane single engine land and sea ratings. He also held a third class medical certificate issued on August 8, 2005. The medical certificate listed no limitations or restrictions. According to Federal Aviation Administration (FAA) records, the pilot had accumulated 1,500 hours total flight experience as of the date of his medical examination.

AIRCRAFT INFORMATION

The airplane was a 4-seat amateur-built Seawind 3000, amphibious airplane. The airworthiness certificate for the airplane was issued on May 30, 2003. The airplane was a single-engine monoplane of predominately composite construction. The fuselage of the airplane also served as the hull for water operations. The airplane was equipped with retractable tri-cycle landing gear. The engine was mounted above the fuselage on a mount that extended forward from the vertical stabilizer. The airplane was powered by a Lycoming model IO-540-K1B5 engine rated to produce 300 horsepower.

METEOROLOGICAL INFORMATION

The weather reporting station located at the Kirksville Regional Airport, Kirksville, Missouri, about 23 miles west of the accident site, recorded the weather conditions at 1555 as: winds 340 degrees at 5 knots gusting to 14 knots; visibility 10 miles; scattered clouds at 3,700 feet;

temperature 19 degrees Celsius; dew point 9 degrees Celsius; altimeter setting 30.04 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest in a field east of Knox City. The terrain was rising in the direction of the forced landing with vegetation about 8 to 12 inches tall. The wreckage path was oriented about 210 degrees and the initial impact point was about 150 feet from the main wreckage. The initial impact point ground scars consisted of 3 parallel marks about 9 feet in length. Further along the wreckage path, a deep ground scar was found along with one of the nose landing gear doors. The airplane was inverted and was consumed by fire except for the forward 4 feet of the fuselage/hull. The nose landing gear was found in the retracted position within this nose section. The right nose landing gear door and a portion of the left nose landing gear door were separated from the airplane. The bulkhead aft of the nose landing gear was impacted with dirt and vegetation. The left wing had folded on top of the fuselage.

An examination of the wreckage was conducted. Control system integrity could not be established due to the extent of the fire damage. However, no anomalies were found that could be determined to have existed prior to the impact. The cockpit instruments and switches were consumed by the post-crash fire and yielded no useable evidence. The integral fuel tanks were consumed by fire and fuel system fuel lines were broken and torn apart during the impact sequence. No evidence of a pre-impact fire was found. Examination of the engine revealed that the engine was not seized and was free to rotate. One of the propeller blades exhibited chordwise scratching on the cambered side near the tip. Significant fire damage was evident on the engine, accessory section, and accessories. No determination regarding the operational status of the engine or its accessories could be made due to the extent of the fire damage.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot initially survived the accident and was transported to a Quincy, Illinois, hospital. Subsequently, the pilot was transported to St. John's Hospital in Springfield, Illinois, where he died on April 25, 2007, as a result of his injuries. According to the Coroner's Inquest, the pilot perished due to cardiopulmonary arrest due to shock, due to burns covering 60 percent of his body.

Pilot Information

Certificate:	Private	**Age:**	64,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):		**Restraint Used:**	
Instrument Rating(s):		**Second Pilot Present:**	No
Instructor Rating(s):		**Toxicology Performed:**	No
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	August 1, 2005
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	1500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bird	**Registration:**	N40SW
Model/Series:	Seawind 3000	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	1
Landing Gear Type:	Retractable - Tricycle; Amphibian	**Seats:**	4
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	3400 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:		**Engine Model/Series:**	IO-540-K1B5
Registered Owner:	1271 Seawinders LLC	**Rated Power:**	300 Horsepower
Operator:	Gene E. Underland	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	IRK,966 ft msl	**Distance from Accident Site:**	23 Nautical Miles
Observation Time:	15:55 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Scattered / 3700 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots / 14 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	340°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.04 inches Hg	**Temperature/Dew Point:**	19°C / 9°C
Precipitation and Obscuration:			
Departure Point:	MALDEN, MO (MAW)	**Type of Flight Plan Filed:**	None
Destination:	WILLMAR, MN (ILL)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal, 1 Serious	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	2 Fatal, 1 Serious	**Latitude, Longitude:**	40.20861,-92.007774

Administrative Information

Investigator In Charge (IIC):	Brannen, John
Additional Participating Persons:	Tom Russell; FAA-St. Louis FSDO; St Louis, MO
Original Publish Date:	December 28, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=65673