



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Livermore Falls, ME	<b>Accident Number:</b>	ERA09LA433
<b>Date &amp; Time:</b>	08/01/2009, 0845 EDT	<b>Registration:</b>	N49778
<b>Aircraft:</b>	BOEING A75N1	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (partial)	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot reported that during the takeoff roll, the engine began to lose power. With insufficient runway remaining to stop, he elected to continue the takeoff. The engine continued to lose power and the airplane settled into the trees, resulting in structural damage to the wings. Postaccident inspection of the wreckage by a Federal Aviation Administration inspector revealed no evidence of preexisting mechanical anomalies. The engine ran satisfactorily after the accident; however a full-power run was not conducted due to propeller damage. The pilot reported that the grass in the run-up area was wet, with standing water, and that conditions were "ideal for the formation of carburetor ice." While the Federal Aviation Administration's Carburetor Icing Chart revealed "Serious icing (glide power)" for the reported temperature and dew point conditions, the investigation could not conclusively determine that carburetor ice caused the loss of engine power.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reasons.

## Findings

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<b>Environmental issues</b>	Conducive to carburetor icing - Contributed to outcome
<b>Not determined</b>	Not determined - Unknown/Not determined (Cause)

## Factual Information

On August 1, 2009, about 0845 eastern daylight time, a Boeing A75N1, N49778, was substantially damaged following a loss of engine power and forced landing at Bowman Field Airport, Livermore Falls, Maine. The airplane was operated by a private individual. The certificated private pilot and one passenger were not injured. Visual meteorological conditions prevailed at the time, and no flight plan was filed for the 14 Code of Federal Regulations Part 91 personal flight. The flight was originating at the time of the accident.

The pilot stated that he took off in the airplane after replacing the fuel filter, which was brand new. It was very warm and humid at the time, and you could see a fog layer about 4 feet off the ground. The grass runway was wet, and there was standing water in the run-up area. He stated that the conditions at the time were “ideal for the formation of carburetor ice.” The engine began to lose power late in the takeoff roll, but there was insufficient room to stop. He took off, the engine continued to lose power, and the airplane settled into the trees. Three of the four wings sustained substantial damage.

Following the accident, two inspectors with the Federal Aviation Administration (FAA) visited the accident site and inspected the wreckage. They reported that a physical examination of the airplane and fuel system revealed no anomalies. The fuel strainer bowl was clean and there was no evidence of fuel contamination found. They reported that a complete fuel system cleaning occurred approximately 1.5 hours prior to the accident.

After the wreckage was recovered to the pilot’s storage facility, a test run of the engine was attempted by the pilot. He reported that the engine started on the first attempt and ran without hesitation or loss of power. The pilot did not attempt a full-power run due to the impact damage to the propeller.

According to FAA records, the pilot’s latest third class medical certificate was dated October 19, 2005. The pilot reported that he had accomplished a biennial flight review (BFR) about one year prior to the accident. He also reported that the airplane received an annual inspection in August, 2008. He was unable to provide documentation of a current BFR or annual aircraft inspection to the FAA inspectors.

The 0853 weather observation for Augusta, Maine (AUG), located about 16 miles east of the accident site, included the following: sky clear, winds calm, visibility 10 statute miles, temperature 21 degrees Celsius, dew point 17 degrees Celsius, and altimeter setting of 30.02 inches of mercury. The Federal Aviation Administration Special Airworthiness Bulletin number CE-09-35, titled “Carburetor Icing Prevention,” includes a chart indicating conditions conducive to carburetor icing. For the approximate ambient temperature and dew point at the time of the accident, the flight was conducted in “Serious icing (glide power)” conditions.

## History of Flight

Takeoff	Loss of engine power (partial) (Defining event)
Initial climb	Loss of engine power (partial)
Emergency descent	Controlled flight into terr/obj (CFIT)

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	54, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Rear
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 With Waivers/Limitations	<b>Last Medical Exam:</b>	10/19/2005
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 1300 hours (Total, all aircraft), 122 hours (Total, this make and model), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	BOEING	<b>Registration:</b>	N49778
<b>Model/Series:</b>	A75N1	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	75-3009
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>		<b>Certified Max Gross Wt.:</b>	2950 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3700 Hours	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	R-680 Series
<b>Registered Owner:</b>	SMITH MARK D	<b>Rated Power:</b>	220 hp
<b>Operator:</b>	SMITH MARK D	<b>Air Carrier Operating Certificate:</b>	None

## Meteorological Information and Flight Plan

Observation Facility, Elevation:	AUG, 352 ft msl	Observation Time:	0853 EDT
Distance from Accident Site:	16 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	90°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	21° C / 17° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	Calm	Visibility (RVR):	
Altimeter Setting:	30.02 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Livermore Falls, ME (B10)	Type of Flight Plan Filed:	None
Destination:	Norridgewock, ME (OWK)	Type of Clearance:	None
Departure Time:	0845 EDT	Type of Airspace:	

## Airport Information

Airport:	Bowman Field Airport (B10)	Runway Surface Type:	Grass/turf
Airport Elevation:	327 ft	Runway Surface Condition:	Standing Water; Wet
Runway Used:	20	IFR Approach:	None
Runway Length/Width:	2201 ft / 120 ft	VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None		

## Administrative Information

Investigator In Charge (IIC):	Ralph E Hicks	Adopted Date:	08/12/2010
Additional Participating Persons:	Gary Readio; FAA/FSDO; Portland, ME		
Publish Date:	08/12/2010		
Investigation Docket:	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74422">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74422</a>		

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