



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Ashland, ME	<b>Accident Number:</b>	NYC03GA094
<b>Date &amp; Time:</b>	05/04/2003, 0930 EDT	<b>Registration:</b>	N46773
<b>Aircraft:</b>	Piper PA-18-150	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal

**Flight Conducted Under:** Part 91: General Aviation - Public Aircraft

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## Analysis

The pilot was maneuvering the airplane for animal tracking when it struck trees and came to rest inverted. Examination of the airframe and engine did not reveal any pre-impact mechanical malfunctions, and fuel was found in all three fuel tanks. Tree scars and propeller signatures were consistent with engine power. Review of the pilot's toxicology report revealed that he had recently ingested at least three different over-the-counter medications which contained sedating antihistamines. The levels of substances in the pilot's blood were at least five times higher than the levels expected with a typical maximum single over-the-counter dose of the medications. The pilot's wife stated that he was "fighting a bad cold for about a week," prior to the accident. She added the pilot was taking NyQuil to "get through the night," and it was possible he was also taking Benadryl.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's impairment due to over-the-counter medications, which resulted in a loss of aircraft control while maneuvering.

## Findings

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Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: MANEUVERING

### Findings

1. AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. (C) IMPAIRMENT(DRUGS) - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

3. OBJECT - TREE(S)

## Factual Information

### HISTORY OF FLIGHT

On May 4, 2003, about 0930 eastern daylight time, a Piper PA-18-150, N46773, was substantially damaged during a collision with trees, while maneuvering near Ashland, Maine. The certificated commercial pilot was fatally injured. Visual meteorological conditions prevailed for the local flight that departed Houlton International Airport (HUL), Houlton, Maine. No flight plan was filed for the commercial public use flight conducted under 14 CFR Part 91.

According to the owner of a fixed based operator at HUL, the pilot added 27.4 gallons of 100LL aviation gasoline prior to the flight. The owner estimated that the pilot departed HUL about 0800.

An employee of the Maine Department of Inland Fisheries and Wildlife stated that the pilot was under contract to perform aerial observation flights. Specifically, the pilot was tracking a lynx at the time of the accident. The employee added that the pilot would usually fly "a couple of hundred" feet above the ground while tracking radio signals from a collar secured to the animal. Occasionally, the pilot would fly lower to obtain visual contact with the animal. The employee added that the pilot was very experienced at aerial observation flights, and had accumulated several thousand hours of flight time conducting similar flights. In addition, the pilot had flown approximately 8 hours during the day prior to the accident.

The accident occurred during the hours of daylight; located about 46 degrees, 36.27 minutes north latitude, and 69 degrees, 08.60 minutes west longitude.

### PILOT INFORMATION

The last entry in the pilot's logbook was dated November 7, 2001. At that time, the pilot reported a total flight experience of approximately 21,810 hours; of which, about 21,586 hours were as pilot in command. Approximately 21,491 hours were in single engine airplanes, and the majority of flight time within the preceding two years was in the accident airplane.

The pilot's most recent Federal Aviation Administration (FAA) second class medical certificate was issued on January 23, 2003, with a special restriction stating that the certificate was valid for six months. At that time, the pilot reported a total flight experience of 22,510 hours.

### AIRCRAFT INFORMATION

The airplane's most recent annual inspection and engine overhaul was completed on December 12, 2002. The airplane had flown approximately 175 hours since that inspection.

### METEOROLOGICAL INFORMATION

The reported weather at an airport about 50 miles east of the accident site, at 0935, was: wind from 270 degrees at 11 knots, sky clear, temperature 53 degrees F, dew point 25 degrees F, altimeter 30.07 inches Hg.

### WRECKAGE INFORMATION

The wreckage was located in a wooded area, and examined on May 5, 2003. The airplane was found intact, inverted, and oriented about a 250-degree heading. It was located about 20 feet south of a logging road, which was oriented on an approximate 270-degree heading. Two tree

strikes were observed prior to the wreckage. The first strike was approximately 140 feet from the wreckage, and the second strike observed about 100 feet beyond the first strike, on an approximate 260-degree heading toward the wreckage. A freshly cut tree branch was located in the vicinity of the wreckage, and exhibited black paint transfer. All major components of the airplane were accounted for at the scene.

Examination of the wreckage revealed no pre-impact mechanical malfunctions. Flight control continuity was confirmed from all control surfaces to the cockpit controls. The right wing had two fuel tanks, and fuel was found in both tanks. The left wing had one fuel tank, and it also contained fuel. The flaps were observed near the retracted position, the right aileron was deflected upward, and the left aileron was deflected downward. Both wings exhibited impact damage at the leading edge, but the damage to the left wing was more severe. The left wing had folded aft, and exhibited two leading edge bows near the wingtip, consistent with tree-strikes.

The fuel selector was positioned to the left tank. The throttle was in the full forward position, and the mixture was about 1/4 inch from the rich position. The cockpit area was crushed, and the lap belt and shoulder harness were fastened. The flap handle was found in the first "notch" position. The empennage, vertical stabilizer, and horizontal stabilator sustained minor damage. The stabilator trim was in a nose down position.

The engine remained attached to the airframe. One propeller blade exhibited s-bending, and the other blade was curled at the tip. The top spark plugs and valve covers were removed from the engine. The spark plug electrodes were intact and light gray in color, except for the number two top plug which was coated with oil. The propeller rotated freely by hand. Crankshaft, camshaft, and valve train continuity were confirmed. Thumb compression was attained on all four cylinders, and all eight ignition leads produced spark. Oil was present throughout the engine, and the oil pressure screen was absent of debris. The fuel line to the carburetor inlet screen contained fuel, and the inlet screen was absent of debris. Some fibrous debris was noted in the gascolator.

#### MEDICAL AND PATHOLOGICAL INFORMATION

The Safety Board's Medical Officer extracted information from the pilot's FAA medical records and compiled a factual report of medical information. Review of the medical records revealed that the FAA had monitored the pilot for a history of single-vessel coronary artery disease, which had been stable and asymptomatic for about 10 years.

On June 27, 2000, the pilot's cardiologist reported to the FAA Aeromedical Certification Division:

"... He clinically remains asymptomatic with no symptoms attributable to angina, congestive heart failure or limitation in his exercise capacity. On the basis of his exercise performance on his most recent treadmill stress test, he is at very low risk for cardiac event..."

On July 7, 2002, the pilot's cardiologist report to the FAA Aeromedical Certification Division:

"...In combination with his stable symptoms and his previous noninvasive evaluation and his most current treadmill stress performance, he is at very low risk for any cardiac events..."

The cardiovascular findings on autopsy performed on the pilot by the Office of the Chief Medical Examiner, Augusta, Maine were consistent with the known cardiac disease. The cause of death was listed as "Blunt Injuries to Head."

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

0.112 (ug/ml, ug/g) CHLORPHENIRAMINE detected in Blood

CHLORPHENIRAMINE present in Urine

DEXTRORPHAN detected in Blood

DEXTRORPHAN present in Urine

DEXTROMETHORPHAN detected in Blood

DEXTROMETHORPHAN present in Urine

0.41 (ug/ml, ug/g) DIPHENHYDRAMINE detected in Blood

DIPHENHYDRAMINE present in urine

0.165 (ug/ml, ug/g) DOXYLAMINE detected in Blood

DOXYLAMINE present in Urine

EPHEDRINE detected in Blood

EPHEDRINE detected in Urine

PSEUDOEPHEDRINE present in Blood

PSEUDOEPHEDRINE present in Urine

PHENYLPROPANOLAMINE present in Urine

168.2 (ug/ml, ug/g) ACETAMINOPHEN detected in Urine"

The findings in the toxicology report were consistent with the ingestion of at least three different over-the-counter medications that contained sedating antihistamines.

The pilot's wife stated that he was "fighting a bad cold for about a week," prior to the accident. She added the pilot was taking NyQuil to "get through the night," and it was possible he was also taking Benadryl.

#### ADDITIONAL INFORMATION

The wreckage was released to a relative of the pilot on May 5, 2003.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	65, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	01/23/2003
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	03/22/2001
<b>Flight Time:</b>	22500 hours (Total, all aircraft), 5000 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N46773
<b>Model/Series:</b>	PA-18-150	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	18-3591
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	12/12/2002, Annual	<b>Certified Max Gross Wt.:</b>	1750 lbs
<b>Time Since Last Inspection:</b>	175 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	9297 Hours at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-320
<b>Registered Owner:</b>	Macannamac Inc.	<b>Rated Power:</b>	160 hp
<b>Operator:</b>	John McPhee	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PQJ, 534 ft msl	Distance from Accident Site:	50 Nautical Miles
Observation Time:	0935 EDT	Direction from Accident Site:	90°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	270°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	12° C / -4° C
Precipitation and Obscuration:			
Departure Point:	Houlton, ME (HUL)	Type of Flight Plan Filed:	None
Destination:	(HUL)	Type of Clearance:	None
Departure Time:	0800 EDT	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	46.604444, -69.143333

## Administrative Information

Investigator In Charge (IIC):	Robert J Gretz	Report Date:	03/02/2004
Additional Participating Persons:	Paul W Hubbard; FAA FSDO-05; Portland, ME George Hollingsworth; Continental Motors; Reston, VA David Moore; Lycoming Engines; Ardsley, PA		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).