



National Transportation Safety Board Aviation Accident Final Report

Location:	Stow, MA	Accident Number:	NYC01LA174
Date & Time:	07/15/2001, 2107 EDT	Registration:	N9133D
Aircraft:	Piper PA-46-310P	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

Witnesses reported hearing an airplane engine at night, at high power for about 5 seconds followed by impact. They went to the scene and found the airplane on the left side of the approach end of runway 03, on fire. The pilot was removed and the fire was extinguished. The airplane had struck a runway threshold light located about 25 feet to the left side of the runway, and slid about 100 feet into trees, angling away from the runway on a heading of 360 degrees. The outboard 5 feet of the left wing was bent up about 20 degrees. Ground scars were found corresponding to the positions of the left, right, and nose landing gears, all of which had collapsed. The inboard section of the left wing came to rest on the nose of the airplane. The propeller blades were deformed with "S" bending and leading edge gouges. Flight control continuity was verified to the rudder and elevator. The aileron control cables had separated with puffed ends. All separations occurred at other than attach points. The pilot had received head injuries and has no memory of the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain airplane control during a go-around.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: GO-AROUND (VFR)

Findings

1. LIGHT CONDITION - BRIGHT NIGHT
2. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. TERRAIN CONDITION - GRASS
4. OBJECT - RUNWAY LIGHT
5. OBJECT - TREE(S)

Factual Information

HISTORY OF FLIGHT

On July 15, 2001, at 2107 eastern daylight time, a Piper PA-46-310P, N9133D, was destroyed while attempting to land on runway 03 at Minute Man Air Field (6B6), Stow, Massachusetts. The certificated private pilot received serious injuries. Visual meteorological conditions prevailed for the business flight. No flight plan had been filed for the flight that departed from Stewart International Airport (SWF), Newburgh, New York, and was conducted under 14 CFR Part 91.

According to the pilot's wife, the pilot departed Columbia Airport, Hudson (1B1), New York, earlier in the day, and flew to Stewart, before departing for Stow.

According to a Federal Aviation Administration (FAA), inspector who interviewed the Stow airport manager:

"The pilot called Stow airport (6B6) on...July 15, 2001, and inquired of...[the airport manager] the proximity of 'Shaker Hills Golf Course.'...[The airport manager] advised the pilot, and then inquired what kind of airplane he would be flying into Stow. Pilot advised a Piper Malibu...[The airport manager] at this point, encouraged him to use Fitchburg (Mass) airport because of longer runways. The pilot insisted on using Stow as it was close to his destination...The pilot indicated his intentions to land at Stow before darkness (late PM or early evening)...[The airport manager] emphatically tried to discourage this pilot from landing at Stow owing to runway length...."

No one witnessed the accident. However, according to a person who was outside of his residence near the airport:

"It was a very calm quiet night. I then heard an airplane engine, first thought it was exceptionally loud. I also thought it was taking off, a very loud sudden engine acceleration for maybe 5 seconds as if taking off, then I heard a "thump" engine noise "thump" crash - quiet. I ran to the phone and called 911 reporting a plane crash. I got into my car and drove to the airport. The airplane was on fire at the south end of the airport....I broke the driver's side window, reached into and pulled the operator's feet free [with help from two others] pulled him out...."

Another person who was working inside a hanger at the airport stated:

"I heard a plane...then heard 2 booms...I looked outside saw large flames, called 911, took off on bike with fire extinguisher...."

PERSONNEL INFORMATION

The pilot held a private pilot certificate with ratings for airplane single engine land and instrument airplane. His last flight review took place on February 22, 2001. The last entry in his pilot logbook was dated June 6, 2001. His total flight experience at that point was 3,500.2 hours, with 3,425 hours as pilot in command, and 2,616 hours in make and model. In the preceding 12 months, he had logged 204 hours, including 55 hours of night time.

The pilot received annual recurrent training. According to a flight instructor who had known the pilot for several years, and had conducted the pilot's initial Malibu checkout, the pilot had a

sharp mind. When the pilot focused on the task at hand, he did not experience any problems. However, the flight instructor also noted that the pilot occasionally needed to be reminded to keep himself focused on the task he was completing. The flight instructor added that the pilot did not experience any problems with multi-tasking.

According to the pilot's wife, the pilot was unconscious for several weeks after the accident. After he regained consciousness, he had no memory of the accident flight.

AIRCRAFT INFORMATION

The airplane was a 1989 Piper PA-46, which the pilot had purchased new. The airplane had been modified with the exchange of the Continental TSIO 520-BE1 engine, for a Continental TSIO 550-C1B engine, which had been de-rated to 310 horsepower. The fuel capacity of the wings had been increased by 10 gallons on each side, and electrically actuated flight spoilers had been added to the wings. The stall speed was increased 3 knots when the spoilers were extended. The spoilers had been installed on the airplane for 9 1/2 years.

According to the Pilot's Operating Handbook (POH), the maximum takeoff weight was 4,100 pounds, and the maximum landing weight was 3,900 pounds. The estimated landing weight at Stow was 3,798 pounds. According to performance charts, the airplane would have required about 1,825 feet to land and stop, from over a 50-foot obstacle, at 3,900 pounds, which included a ground roll of about 1,125 feet. The balked landing climb capability was greater than 600 fpm with landing gear extended, and the wing flaps full down, at 3,900 pounds.

METEOROLOGICAL INFORMATION

The closest weather reporting station, Fitchburg, Massachusetts, was located 12 nautical miles distant on a heading of 314 degrees. The 2052 weather observation recorded the wind from 330 degrees at 3 knots, with clear skies.

The sun's position was computed to be 7.5 degrees below the horizon at 2107. Sunset occurred at 2023. Civil twilight occurred at 2057. Nautical twilight occurred at 2140. The moon was 32.7 degrees below the horizon.

AIRPORT INFORMATION (Destination)

Minute Man Air Field had two runways, one with a gravel surface, and the other with an asphalt surface. The asphalt runway, 03/21 was 2,770 feet long and 48 feet wide.

According to an inspector from the Massachusetts Aeronautics Commission (MAC), the edge lights for runway 03 were placed about 25 feet outboard of the hard surface of the runway. Trees were located adjacent to the west side of runway 03. At the approach end of runway 03, the trees branches were about 15 feet from the runway edge lights. Nearing mid-field, the distance between the runway edge lights and the trees branches decreased to about 6 feet. The trees were located on a designated "wetlands" area, and a stream flowed through the wooded area.

According to photographs of the runway, there were no threshold markings, or displaced thresholds markings on runway 03.

No FAA reference was found for the simplified visual approach slope indicator that was installed on runway 03. According to the FAA inspector who was present the night of the accident, and participated in the follow-up investigation, he remembered seeing the VASI for runway 03 illuminated the night of the accident. Further, he reported that the VASI for runway 03 was located on the left side of the runway, about 280 feet (by pacing) beyond the approach end, and set for a descending flight path of 8 degrees.

WRECKAGE AND IMPACT INFORMATION

The airplane was examined on the night of the accident, on the following day, and again on July 19, 2001.

A debris trail started at a threshold light, located 25 feet to the left side of runway 03, and extended about 100 feet, on a heading of 360 degrees. At the start of the debris trail, a runway threshold light, mounted on a shaft about 2 1/2 feet high, was bent over on a heading of 360 degrees. A similar light located 10 feet to the right was not damaged. The airplane came to rest at the end of the debris trail, upright, and orientated on a heading of 290 degrees.

Between the broken threshold light and the airplane, there was an area of vegetation kill, similar to gasoline being spilled on grass. The vegetation kill started about 3 feet beyond the broken light, and continued to widen as it progressed toward the tree line. To the right of the vegetation kill were three ground scars. The scars were staggered when looking in the direction of airplane travel, with the left ground scar first, followed by the middle ground scar, and then the right ground scars. The width between the ground scars was consistent with the width of the landing gear positions on the airplane. The middle scar was also wider and longer than the other two scars.

The left wing was separated from the fuselage, and in two sections. The outboard section was near the base of the trees, inverted, with fire damage. The wing flap was separated from the wing. The flight spoiler was found in the retracted position. The outboard 5 feet of the left wing and aileron were bent in an upward direction about 20 degrees. At the apex of the bend, the wing skin which formed the outer part of the fuel tank, was bent inward and opened up. The inboard section of the left wing was resting on top of the engine.

The fuselage was nosed into the tree line, with the right wing still attached. The right wing flap was set with about 15 to 20 degrees of extension. The flight spoiler was in the retracted position.

The left and right main landing gear were separated from the wings in a rearward direction. The nose landing gear was collapsed rearward, and remained with the airplane.

The engine crankshaft was rotated, and valve train continuity was confirmed. Thumb compression was attained on all cylinders. One magneto produced spark while the other was destroyed by fire.

The propeller blades had leading edge impact gouging and "S" bending along the blades.

Fractures were found in the aileron flight control cables at other than the cable attach points, and all fractures had puffed ends. The rudder and elevator flight control cables were intact.

Filament stretch was found in a landing down light bulb.

A small amount of a clear blue liquid, similar in odor to 100 LL aviation grade gasoline, was found in the fuel strainer.

No splattered metal was found on the leading edges of any aerodynamic surfaces. No soot accumulations were found along the trailing edges of rivet lines.

ADDITIONAL INFORMATION

The airplane was released to the airport manager on July 19, 2001.

Pilot Information

Certificate:	Private	Age:	47, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	12/05/2000
Occupational Pilot:		Last Flight Review or Equivalent:	02/22/2001
Flight Time:	3500 hours (Total, all aircraft), 2616 hours (Total, this make and model), 3425 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N9133D
Model/Series:	PA-46-310P	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	4608110
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	03/22/2001, Annual	Certified Max Gross Wt.:	4100 lbs
Time Since Last Inspection:	43 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2692.7 Hours at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	TSIO-550-C1B
Registered Owner:	TCI Inc.	Rated Power:	310 hp
Operator:	David I. Laskin	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	FIT, 348 ft msl	Distance from Accident Site:	12 Nautical Miles
Observation Time:	2052 EDT	Direction from Accident Site:	314°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.93 inches Hg	Temperature/Dew Point:	18° C / 14° C
Precipitation and Obscuration:			
Departure Point:	Newburg, NY (SWF)	Type of Flight Plan Filed:	None
Destination:	Stow, MA (6B6)	Type of Clearance:	None
Departure Time:	2030 EDT	Type of Airspace:	Class G

Airport Information

Airport:	Minute Man Air Field (6B6)	Runway Surface Type:	Asphalt
Airport Elevation:	268 ft	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	None
Runway Length/Width:	2770 ft / 48 ft	VFR Approach/Landing:	Go Around

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	42.460833, -71.518333

Administrative Information

Investigator In Charge (IIC):	Robert L Hancock	Report Date:	08/26/2002
Additional Participating Persons:	Barry Otto; Federal Aviation Administration; Boston, MA Robert Martelloti; Piper Aircraft Co.; Vero Beach, FL Al Butler; Teledyne Continental Motors; Mobile, AL Richard I Bunker; Massachusetts Dept of Aeronautics; Boston, MA		
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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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