# Aviation Investigation Final Report

| | | | |
|---|---|---|---|
| **Location:** | Westfield, Massachusetts | **Accident Number:** | NYC01FA189 |
| **Date & Time:** | July 28, 2001, 16:55 Local | **Registration:** | N3DM |
| **Aircraft:** | Piper PA-46-350 | **Aircraft Damage:** | Destroyed |
| **Defining Event:** | | **Injuries:** | 1 Fatal, 2 Serious |
| **Flight Conducted Under:** | Part 91: General aviation - Personal | | |

## Analysis

After a normal cross county flight, the airplane was on final approach for landing to runway 20, when the air traffic controller instructed the pilot to "go-around" because a preceding airplane had not cleared the runway. The airplane was observed to pitch up and enter a steep, almost 90 degree left bank. The passenger in the rear seat described the flights from and to BAF as "smooth." She stated she thought that the airplane would be landing; however, then realized the airplane was in a left turn. The airplane impacted on the roof of a commercial building, and came to rest upright on a heading of 020 degrees, in a parking lot, about 1/4 mile east of the approach end the runway. Examination of the airplane, which included a teardown of the engine, did not reveal evidence of any pre-impact malfunctions. Weather reported at the airport about the time of the accident included winds from 240 degrees at 7 knots; visibility 10 statue miles and few clouds at 6,500 feet. The pilot owned the airplane and had accumulated about 1,660 hours of total flight experience.

## 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 aircraft control while maneuvering during a go-around.

### Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: GO-AROUND (VFR)

Findings
1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
---

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

Findings
2. OBJECT - BUILDING(NONRESIDENTIAL)

## Factual Information

HISTORY OF FLIGHT

On July 28, 2001, about 1655 eastern daylight time, a Piper PA-46-350, N3DM, was destroyed when it struck a building during a go-around at the Barnes Municipal Airport (BAF), Westfield, Massachusetts. The certificated private pilot was fatally injured, and two passengers sustained serious injuries. Visual meteorological conditions prevailed and an instrument flight rules (IFR) flight plan had been filed for the flight that departed the Nantucket Memorial Airport (ACK), Nantucket, Massachusetts, about 1600. The personal flight was conducted under 14 CFR Part 91.

The airplane was owned by the pilot and based at BAF. The pilot and passengers flew to ACK the day before the accident, and were returning to BAF.

According to the air traffic controller on duty at the time of the accident, the airplane reported inbound from the east for landing, and was sequenced behind two other airplanes for a visual approach to runway 20, a 9,000-foot long, 150-foot wide, asphalt runway. When the airplane was on final approach, about 150 to 200 feet above the ground, the controller instructed the pilot to "go-around" because the preceding airplane had not cleared the runway. The pilot confirmed he wanted to remain "in the pattern" and was instructed to "make left traffic" and to "squawk VFR." The controller observed the airplane pitch up and bank "way left." He further said he thought the airplane was going to make a "360 degree turn on final," and he could "almost see the bottom of both wings." The airplane began to descend, and disappeared from view. He then observed black smoke.

The passenger in the rear seat described the flights from and to BAF as "smooth." She stated she thought that the airplane would be landing; however, then realized the airplane was in a left turn. She further stated:

"...Everything up to that point seemed OK. Within a short period of time (less than a minute), the left hand turn became sharp. I saw [the pilot] quickly push two levers up with his right hand, I saw tops of the trees out of the front of the plane (not sure what came first), then we hit what I now know was a building...."

Several witness observed the airplane from a speedway located near the approach end of the runway. The witnesses described the airplane descending "normally" during its final approach; however, the airplane then "suddenly entered a steep, almost 90 degree left bank," and began to descended. The airplane descended until it disappeared from view and was followed by a "mushroom cloud of black smoke."

One witness stated he heard a "pop noise, like when you rev an engine from idle to full power." The airplane then pitched-up 25 to 30 degrees, and entered a steep left bank. He said he thought the airplane was "going to roll upside-down." He further stated the engine noise was constant, and he did not hear any sputtering prior to the accident.

The airplane impacted on the roof of a commercial building, and came to rest upright on a heading of 020 degrees, in a parking lot, about 1/4 mile east of the approach end of runway 20.

The accident occurred during the hours of daylight approximately 42 degrees, 10 minutes north latitude, and 72 degrees, 42 minutes west longitude.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with an airplane single engine land and instrument rating. The most recent entry in the pilot's logbook was dated July 13, 2001. Review of the logbook revealed the pilot had accumulated about 1,660 hours of total flight experience. During the previous 3 years, the pilot had accumulated about 270 hours of flight experience, all in the accident airplane. During the previous 12 months, the pilot had flown about 65 hours; of which, about 30 hours were flown within the 30 days preceding the accident.

The pilot's most recent Federal Aviation Administration (FAA) second class medical certificate was issued on November 18, 1999.

AIRCRAFT INFORMATION

Review of aircraft maintenance records revealed that the airplane's most recent annual inspection was performed on September 5, 2000. The airplane had been operated about 43 hours since the inspection.

METEOROLOGICAL INFORMATION

A weather observation taken at BAF, at 1653, reported: winds from 240 degrees at 7 knots; visibility 10 statue miles; few clouds at 6,500 feet, temperature 75 degrees F; dew point 48 degrees F; altimeter 30.20.

WRECKAGE AND IMPACT INFORMATION

All major portions of the airplane were accounted for at the accident site. The left wing, the majority of right wing, cockpit, and portions of the forward fuselage were consumed in a post impact fire.

The left wing was separated at the wing root, and fuel was observed in the breached fuel tank. The left flap was separated from its attachment points. The inboard 7 feet of the right wing remained attached to the fuselage. The right flap was attached at the inboard and middle

hinge. The right flap appeared to be near the retracted position. The remainder of the right wing was destroyed by fire and impact forces. The vertical stabilizer sustained minor damage. The rudder skin near the top attachment point was buckled. The horizontal stabilizer sustained impact damage. The left horizontal stabilizer was partially separated and bent upward.

Aileron flight control continuity was confirmed from the point of the respective wing separations to the pilot's control yoke. Additionally, flight control continuity was confirmed from the elevator control surface to the pilot's control yoke, and from the rudder control surface to the rudder peddles.

The nose and right landing gear were observed in the retracted position. The left landing gear was liberated during the accident sequence. The gear handle in the cockpit was found in the retracted position.

The cockpit flap handle was observed in the area of 20 degrees; however, the flap indicator and measurement of the flap actuator jackscrew indicated a flap position between 0 and 10 degrees.

The engine remained attached to it's mounts, and the propeller remained attached to the engine crankshaft flange. Propeller, mixture, and throttle control continuity were confirmed from the engine to their respective cockpit control.

Both propeller blades displayed chord wise scratches and leading edge nicks. One propeller blade was bent rearward about 45 degrees, 14 inches outboard of the hub. The other blade was found rotated in the hub approximately 180 degrees, and was also bent rearward.

The engine was rotated via the propeller. Valve train continuity was observed, and compression was attained on all cylinders. Both magnetos produced spark through their respective ignition leads when rotated. Additionally, examination of spark plugs removed from the engine revealed their electrodes were intact and they were light gray in color.

Fuel was observed at the engine driven fuel pump. Additionally, the shear shaft was intact and the pump rotated freely.

The oil filter and fuel injector servo screens were absent of debris and contamination.

The engine was retained for further examination.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot initially survived the accident and was transferred to a hospital in Bridgeport, Connecticut; however, he succumbed to his injuries on July 29, 2001. According to the Chief Medical Examiner's Office, for the State of Connecticut, an autopsy was not performed on the

pilot.

Toxicological testing was conducted by the FAA Toxicology Accident Research Laboratory, Oklahoma City, Oklahoma.

TESTS AND RESEARCH

On August 29, 2001, the engine was disassembled at Textron Lycoming, Williamsport, Pennsylvania. The examination did not reveal evidence of any pre-impact mechanical malfunctions.

ADDITIONAL INFORMATION

Re-Fueling

The airplane was last refueled at BAF, with 67.8 gallons of aviation gasoline on July 27, 2001.

Wreckage Release

The airplane wreckage was released on August 1, 2001, to a representative of the owners insurance company.

## Pilot Information

| | | | |
|---|---|---|---|
| **Certificate:** | Private | **Age:** | 55,Male |
| **Airplane Rating(s):** | Single-engine land | **Seat Occupied:** | Left |
| **Other Aircraft Rating(s):** | None | **Restraint Used:** | |
| **Instrument Rating(s):** | Airplane | **Second Pilot Present:** | No |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | Yes |
| **Medical Certification:** | Class 2 Valid Medical--w/ waivers/lim | **Last FAA Medical Exam:** | November 18, 1999 |
| **Occupational Pilot:** | No | **Last Flight Review or Equivalent:** | September 4, 2000 |
| **Flight Time:** | 1660 hours (Total, all aircraft), 1470 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) | | |

## Aircraft and Owner/Operator Information

| | | | |
|---|---|---|---|
| **Aircraft Make:** | Piper | **Registration:** | N3DM |
| **Model/Series:** | PA-46-350 | **Aircraft Category:** | Airplane |
| **Year of Manufacture:** | | **Amateur Built:** | |
| **Airworthiness Certificate:** | Normal | **Serial Number:** | 4622079 |
| **Landing Gear Type:** | Retractable - Tricycle | **Seats:** | 6 |
| **Date/Type of Last Inspection:** | September 5, 2000 Annual | **Certified Max Gross Wt.:** | 4300 lbs |
| **Time Since Last Inspection:** | 43 Hrs | **Engines:** | 1 Reciprocating |
| **Airframe Total Time:** | 1030 Hrs at time of accident | **Engine Manufacturer:** | Lycoming |
| **ELT:** | Installed, activated, did not aid in locating accident | **Engine Model/Series:** | TIO-540-AE2A |
| **Registered Owner:** | Munir H. Abbasy | **Rated Power:** | 350 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:** | BAF,271 ft msl | **Distance from Accident Site:** | |
| **Observation Time:** | 16:53 Local | **Direction from Accident Site:** | |
| **Lowest Cloud Condition:** | Few / 6500 ft AGL | **Visibility** | 10 miles |
| **Lowest Ceiling:** | None | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | 7 knots / | **Turbulence Type Forecast/Actual:** | / |
| **Wind Direction:** | 240° | **Turbulence Severity Forecast/Actual:** | / |
| **Altimeter Setting:** | 30.2 inches Hg | **Temperature/Dew Point:** | 24°C / 9°C |
| **Precipitation and Obscuration:** | No Obscuration; No Precipitation | | |
| **Departure Point:** | NANTUCKET, MA (ACK ) | **Type of Flight Plan Filed:** | IFR |
| **Destination:** | Westfield, MA (BAF ) | **Type of Clearance:** | IFR |
| **Departure Time:** | 16:00 Local | **Type of Airspace:** | Class D |

## Airport Information

| | | | |
|---|---|---|---|
| **Airport:** | BARNES MUNI BAF | **Runway Surface Type:** | Asphalt |
| **Airport Elevation:** | 271 ft msl | **Runway Surface Condition:** | Dry |
| **Runway Used:** | 20 | **IFR Approach:** | Visual |
| **Runway Length/Width:** | 9000 ft / 150 ft | **VFR Approach/Landing:** | Go around;Traffic pattern |

## Wreckage and Impact Information

| | | | |
|---|---|---|---|
| **Crew Injuries:** | 1 Fatal | **Aircraft Damage:** | Destroyed |
| **Passenger Injuries:** | 2 Serious | **Aircraft Fire:** | On-ground |
| **Ground Injuries:** | N/A | **Aircraft Explosion:** | None |
| **Total Injuries:** | 1 Fatal, 2 Serious | **Latitude, Longitude:** | 42.17139,-72.707221 |

## Administrative Information

| | |
|---|---|
| **Investigator In Charge (IIC):** | Schiada, Luke |
| **Additional Participating Persons:** | Jason George; Windsor Locks, CT<br>Robert Martellotti; Vero Beach, FL<br>David Moore; Ardsley, PA<br>Richard Bunker; Boston, MA |
| **Original Publish Date:** | August 26, 2002 |
| **Last Revision Date:** | |
| **Investigation Class:** | Class |
| **Note:** | |
| **Investigation Docket:** | https://data.ntsb.gov/Docket?ProjectID=52846 |