



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

| | | | |
|--------------------------------|---|-------------------------|------------|
| Location: | Tampa, Florida | Accident Number: | ATL02FA032 |
| Date & Time: | January 5, 2002, 17:03 Local | Registration: | N2371N |
| Aircraft: | Cessna 172R | Aircraft Damage: | Destroyed |
| Defining Event: | | Injuries: | 1 Fatal |
| Flight Conducted Under: | Part 91: General aviation - Instructional | | |

Analysis

The student pilot was instructed by his flight instructor to preflight the Cessna 172R airplane and then wait for the instructor before beginning the training flight. Witnesses stated that the student pilot proceeded to the airplane, removed the wing tie-downs, boarded the airplane, started the engine, and immediately taxied to runway 35R without the flight instructor. The student pilot then took off from the runway without communicating with the airport Air Traffic Control (ATC) tower. The tower controllers stated that the airplane turned to the right and headed toward the southeast immediately after takeoff. No transponder signal was received from the airplane. The tower controllers notified Tampa ATC approach controllers, and they also notified the pilots of a Coast Guard helicopter that was flying in the local area. Additionally, the controllers made numerous attempts to contact the pilot by emergency radio frequency, but were unsuccessful. The Coast Guard helicopter pilots were asked to intercept the airplane. The airplane proceeded to a local Air Force military base and over flew the base control tower, two aircraft, and three hangars at a low altitude. The airplane was then observed to alter its heading toward a tall office building in the city of Tampa. While en route to the building, the Coast Guard helicopter pilots intercepted the airplane and attempted to signal the pilot to land. According to the helicopter pilots, the student pilot saw their hand gestures and gestured back to them; however, the helicopter pilots could not determine the kind and meaning of the gestures that the student pilot exhibited. Shortly thereafter, the airplane impacted the office building at the 28th-floor level. An examination of the airframe, systems, and engine did not reveal any evidence of preimpact mechanical malfunction. No indications of ethanol or drugs were found in specimens taken from the student pilot. A 2-page suicide note was found on the student pilot's person.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The pilot's unauthorized use of an aircraft for the purpose of committing suicide.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: CRUISE - NORMAL

Findings

1. (F) OBJECT - BUILDING(NONRESIDENTIAL)
2. (C) STOLEN AIRCRAFT/UNAUTHORIZED USE - INTENTIONAL - PILOT IN COMMAND
3. (C) SUICIDE - INTENTIONAL - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On January 5, 2002, at 1703 eastern standard time, a Cessna 172R, N2371N, registered to National Aviation Holdings, Inc., and operated by a student pilot for the purpose of committing suicide, collided in-flight with the Bank of America Bank Building in Tampa, Florida. The unauthorized flight was operated under the provision of Title 14 CFR Part 91, and visual flight rules. Visual meteorological conditions prevailed and no flight plan was filed. The student pilot received fatal injuries and the airplane was destroyed. The flight departed St. Petersburg-Clearwater International Airport, St. Petersburg, Florida, at 1651.

According to the student pilot's flight instructor, the student was instructed to preflight the airplane and wait on the instructor before beginning his flight training. Witnesses stated that the student pilot proceeded to the airplane, removed the tie downs, started the airplane, and immediately taxied to runway 35R, and took off without communicating with the Air Traffic Control Tower. The controllers stated that after takeoff the airplane turned right to the southeast. The tower controllers notified Tampa approach and a Coast Guard Helicopter flying in the local area. Additionally, the controllers attempted to contact the pilot via radio frequency 121.5, but were unsuccessful. The Coast Guard Helicopter was asked to intercept the airplane. The airplane proceeded to Mc Dill Air Force Base, over flying the control tower by just a few feet, over flew two aircraft on the runway, and three hangars on the base before proceeding to the Bank of America Building. While enroute to the Bank of America Building the Coast Guard Helicopter intercepted the airplane and attempted to get the pilot to land. According to the Coast Guard Helicopter pilots, they believed the student pilot saw their hand gestures and gestured back, however, the Coast Guard pilots could not determine what kind of gestures the student pilot was making. Shortly there after, the airplane collided with the bank building imbedding itself into the 28th floor.

PERSONNEL INFORMATION

The student pilot held a third class medical dated November 17, 2001. The pilot had accumulated about 19.3 total hours of dual instructional flight time beginning with his first lesson on May 17, 1998. However, the majority of the students training was gained beginning in February of 2001, and continued once or twice each month until the time of the accident. A two page note was found on the pilots person indicating his intention to commit suicide.

AIRCRAFT INFORMATION

The Cessna 172R, N2371N, S/N 17280838, was a four (4) seat, single engine airplane, and was registered to National Aviation Holding, Inc. Clearwater, Florida. The airplane's most recent

maintenance inspection was a phase one, which was completed on December 27, 2001. The airplane had accumulated 15.8 hours of operation since that inspection and had a total time of 1,721.3 hours.

METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed at the time of the accident. Weather conditions were reported at Tampa International at 1736, as; scattered clouds at 500 feet, broken clouds at 2500 feet, visibility 10 statute miles, wind calm, and altimeter setting at 30.15 millimeters of mercury.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted the 28th floor of the Bank of America building in downtown Tampa, Florida. The airplane had been removed from the building prior to the arrival of this investigator. The airplane had been cut into sections and taken to a hangar at the Peter O'Knight Airport in Tampa, Florida. An inspection of the airplane was performed on January 7, 2002. No evidence of fire was observed. All flight controls were accounted for during the review. The left and right wings were separated from the fuselage. The left and right main landing gear remained attached to the fuselage.

The left wing was intact and the aileron and flap remained attached to the wing. Aileron control cable continuity was established from the control surface to the wing root. The aileron control cables were broom strawed at the wing root. The flap cables remained attached at the bellcrank and the cables had broom strawed at the wing root. The left lift strut was separated at the fuselage and remained attached to the wing. The leading edge of the wing had impact damage. The left aileron had impact damage.

The right wing was observed in two pieces. The wing was separated outboard of the flap and the fuel tank. The leading edge of the wing was pushed aft, forward of the fuel tank. The outboard section of the wing including the right lift strut which remained attached to the wing. The aileron and flap remained attached to the wing. Aileron and flap control cable continuity was established from the surfaces to the wing root. The aileron and flap cables were broom strawed at the wing root. the flap actuator was observed in the retracted position.

The tailcone was cut from the fuselage during recovery of the aircraft into two pieces. The right rear portion of the tailcone had impact damage. The horizontal stabilizer and left and right elevator were cut from the empennage during recovery. The elevators remained attached to the stabilizer. The elevator trim tab remained attached to the right elevator. The trim tab was measured at approximately 2 3/8 inches, which is beyond limits. The elevator trim tab was deflected upwards. The elevator trim cable showed indication of overload or being cut at the actuator.

The rudder remained attached to the vertical fin. The rudder cables remained attached to the

control surface and the cables were observed in the tailcone. The control cables in the tailcone had indications of overload or being cut. The aileron, rudder, elevator, and elevator trim control cables were observed at the rear portion of the cabin area along the floor. The cables had indication of overload or being cut. Control cable continuity was confirmed from the rear portion of the cabin to the forward cabin area.

The cockpit area was destroyed by impact damage or had been cut during the recovery. The side of the fuselage was separated from the cockpit floor. The top of the fuselage was separated from the fuselage. The left, right, and rear seats were separated from the cabin floor. The left and right front seats were cut at the four vertical portions of the seat from by recovery personnel. The inboard and outboard seat tracks of the left front seat were distorted. The bottom aft portion of the seat frame remained attached to the seat tracks for the left seat. The bottom forward portion of the seat frame was distorted and bent for the left seat. The left seat back was separated from the seat bottom. The left seat belt/shoulder harness remained in the outboard seat belt receptacle. The left seat shoulder harness and seat belt portion of the belt were cut by recovery personnel. The left shoulder harness inertial reel was observed separated from the fuselage.

The cockpit throttle and mixture controls were full forward. The left and right seat control wheels were separated from the control column. The left and right control wheels were intact. Control cables were observed at the pulleys for the control column.

Examination of the engine found it removed from the fuselage. Continuity could not be verified due to impact damage. No fuel was found in the fuel system. All engine components and accessories were located, and no defects or pre-impact mechanical deficiencies were noted. Examination of the magnetos found them impact separated from the accessory housing. The left magneto would not produce spark, however, the right magneto was operational. The number 1 and number 3 fuel injector lines were impact separated at the flow divider. The fuel pump was destroyed, the fuel injection servo and all controls were impact separated. The number one spark plug (top and bottom) was impact destroyed. All other spark plugs were clean with a low service life and displayed color consistent with "normal" combustion when compared to the Champion Spark Plug Comparison Chart. The oil system was impact destroyed. The oil cooler was impact breached, the oil lines were impact separated, and there was no oil found in the oil reservoir. There was oil found on the engine, in the oil lines, in the oil cooler and on the floor at the site. The number 1 cylinder exhaust push rod was impact damaged. The rocker arms would not move and the rocker cover was impact separated. Both spark plugs on the number 1 cylinder were impact destroyed and the exhaust header was destroyed. The number 2, cylinder oil return line was impact destroyed. The fuel injector nozzle was impact destroyed and the exhaust header was impact destroyed. The number 3, cylinder was in good condition, however, the exhaust header was impact destroyed. The number 4, cylinder was impact destroyed. The rocker arms and bosses were impact broken, and the exhaust header was impact destroyed.

Examination of the propeller found that blade "A" displayed aft bending, S bending and cord

wise scratches. Blade "B" displayed S bending and part of the tip was missing. The blade showed cordwise scratches and leading edge gouging. It also displayed saw tooth gouging. Additionally, there was mid-length trailing edge rotational twisting.

MEDICAL AND PATHOLOGICAL INFORMATION

A post mortem examination of the student pilot was conducted by the Hillsborough County Medical Examiners Department, in Tampa, Florida. The cause of death was listed as Lacerations of brain with fractures of skull due to blunt impact to head. The manner of death was listed as Suicide. On January 9, 2002, a Toxicology examination of the pilot was conducted by the FAA Toxicology Research Laboratory. The examination revealed no Ethanol or drugs detected in the blood.

WITNESS INTERVIEWS

The flight instructor stated that when the student pilot showed up for his lesson, he was just finishing up with a previous student. He said that he noticed the student looking out the window and asked him what he was doing today. The student stated that they were going to work on traffic patterns. The flight instructor told the student to pre-flight the airplane and that he would be out shortly. A lineman at the airport at the time of the occurrence stated that he was fueling another airplane when he caught sight of the student pilot, out of the corner of his eye. He looked up and observed the student walking to the airplane, N2371N, and was carrying what he believes was the books for the airplane. The lineman stated that he was not alarmed by the student pilot because he had seen him on the ramp once or twice in the past. When he finished fueling the airplane he drove the fuel truck over to its parking position within about 50 feet from the Cessna. While driving over he saw the student untie the Cessna and thought he may have already done his preflight and gone back inside the building in the interim and was just coming out again. He linemen said that he got out of the truck, heard an airplane engine turning over unsuccessfully, and started walking in the direction of the parked Cessna. He walked past the end of the fuel truck and heard the engine starting again. He got close enough to touch the wing-tip The engine completed starting and was running and within seconds the Cessna was throttled-up and started rolling. The airplane was facing south and made a left turn out of the its parking position toward taxiway A. The airplane did not stop at the hold short line and made a left turn onto taxiway A, Northbound. He than lost site of the airplane behind so other parked airplanes. The lineman assumed that the airplane acquired runway 35R immediately at taxiway G.

The Commander of the US Coast Guard Helicopter H60, that intercepted the Cessna stated that they were still on the ground when 2371N, the Cessna 172, departed St. Petersburg-Clearwater International Airport (PIE). Just after they became airborne at approximately 1654 hours, they were notified by PIE Air Traffic Control Tower (ATCT) that a Cessna had departed PIE without authorization and was traveling toward McDill Air Force Base (MCF) on their same heading at their 12 o'clock position, and was approximately 4 miles Southeast of PIE. PIE/ATCT then advised them to switch over to MCF for traffic control. MCF tower was

contacted and asked if assistance was requested. MCF asked USCG to help verify the Cessna's intentions and advised them that the Cessna was over MCF's Alert Aircraft on the tarmac. The next contact with MCF advised them that the Cessna was Northeast of MCF. The commander stated that they acquired the Cessna 1 to 2 miles Northeast of MCF heading Northeast. Once in contact they signaled the Cessna with hand/arm gestures to land the airplane as they were approaching Peter O. Knight Airport (TPF), which was approximately 5 miles away. They did see some movement from the Cessna's occupant, but were 400 to 500 feet away at the Cessna's 8:30 o'clock position, and therefore could not make out what the movement was. The Cessna then flew steadily and directly into the Bank of America building.

According to the Air Traffic Controllers at PIE, when the airplane departed on runway 35R, they did not attempt to contact the airplane via radio or any other means. They did contact the controllers at the surrounding airports including McDill AFB. Controllers at McDill AFB stated that when the airplane arrived at their location it was at an altitude of around 3700 feet and descended towards the tower. The controllers stated that they could not see the airplane but could hear it until it passed the tower cab in front and below their windows and then pulled up. The airplane proceeded towards the flight line where two KC-135 tanker airplanes were parked loaded with fuel and passed over them within 75 to 100 feet. The airplane then turned crosswind as if attempting to return when the US Coast Guard Helicopter appeared and the airplane proceeded northeast towards Tampa.

ADDITIONAL INFORMATION

The wreckage was released to the owners insurance representative Kevin Twist, Phoenix Aviation Managers, Inc. 1255 Roberts Blvd., #200, Kennesaw, Georgia 30144.

Student pilot Information

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|----------------------------------|---|--|-------------------|
| Certificate: | Student | Age: | 15, Male |
| Airplane Rating(s): | None | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | Yes |
| Medical Certification: | Class 3 Valid Medical--no waivers/lim. | Last FAA Medical Exam: | November 17, 2001 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 19 hours (Total, all aircraft), 19 hours (Total, this make and model) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--|---------------------------------------|-----------------|
| Aircraft Make: | Cessna | Registration: | N2371N |
| Model/Series: | 172R | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 17280838 |
| Landing Gear Type: | Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | December 27, 2001 100 hour | Certified Max Gross Wt.: | 2450 lbs |
| Time Since Last Inspection: | 15.8 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 1721.3 Hrs at time of accident | Engine Manufacturer: | Lycoming |
| ELT: | Installed, activated, did not aid in locating accident | Engine Model/Series: | IO-360L28 |
| Registered Owner: | National Aviation | Rated Power: | 160 Horsepower |
| Operator: | | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | TPA, 11 ft msl | Distance from Accident Site: | 2 Nautical Miles |
| Observation Time: | 17:36 Local | Direction from Accident Site: | 300° |
| Lowest Cloud Condition: | Scattered / 500 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | Broken / 2500 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | / None | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 0° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30.14 inches Hg | Temperature/Dew Point: | 16°C / 11°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | St Petersburg, FL (PIE) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | |
| Departure Time: | 16:51 Local | Type of Airspace: | |

Airport Information

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|-----------------------------|------------------------------------|----------------------------------|--|
| Airport: | St Petersburg-Clearwater Int'l PIE | Runway Surface Type: | |
| Airport Elevation: | 11 ft msl | Runway Surface Condition: | |
| Runway Used: | | IFR Approach: | |
| Runway Length/Width: | | VFR Approach/Landing: | |

Wreckage and Impact Information

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|----------------------------|---------|-----------------------------|----------------------|
| Crew Injuries: | 1 Fatal | Aircraft Damage: | Destroyed |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Fatal | Latitude, Longitude: | 27.916389,-82.690277 |

Administrative Information

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|--|---|
| Investigator In Charge (IIC): | WILSON, BUTCH |
| Additional Participating Persons: | John B Butler; Textron Lycoming; Arlington, TX Thomas Teplik; Cessna Aircraft Company; Wichita, KS |
| Original Publish Date: | January 16, 2003 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | The NTSB traveled to the scene of this accident. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=53994 |

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).