

N36HT – Beech A36 Accident Summary

Accident Overview and Context

An aircraft accident involving a Beechcraft A36 Bonanza that occurred on **September 7, 2015**, resulting in fatalities.

- The accident took place near Piedmont Triad International Airport in Greensboro, NC. (GSO)
- The pilot was attempting an ILS approach when he encountered Instrument Meteorological Conditions (IMC) and lost control of the aircraft.
- The flight was operating under IFR but the pilot violated regulations regarding recent flight experience.

Pilot's Qualifications and Experience

The pilot held a private pilot certificate with an instrument rating but lacked sufficient experience for IFR flight.

- He had approximately 850 hours of total flight time, primarily in a Piper Cherokee 180.
- His last medical certificate was issued on April 17, 2014, and he reported 750 hours of flight time at that time.
- The pilot's logbook was incomplete and contained numerous discrepancies regarding his flight experience.

Instrument Rating and Training Deficiencies

The pilot's instrument training was inconsistent and lacked formal instruction from authorized instructors.

- He received instrument training from multiple instructors, including one who was not an authorized instrument instructor.
- The pilot passed the Instrument Knowledge Test on his fifth attempt with a score of 73%.
- His logbook entries were often inaccurate, leading to questions about his actual instrument flying knowledge and skills.

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Logbook Inaccuracies and Violations

The pilot's logbook contained numerous errors and omissions, raising concerns about his compliance with FAA regulations.

- He logged flights without proper instructor signatures and failed to log required instrument approaches.
- He operated aircraft without a valid medical certificate on multiple occasions, leading to a 90-day suspension of his pilot certificate.
- Many logbook entries were impossible or contradictory, indicating potential misrepresentation of flight experience.

Transitioning to the Beechcraft A36 Bonanza

The transition to the Beechcraft A36 Bonanza required advanced training that the pilot did not adequately receive.

- The pilot had limited experience in high-performance aircraft and received only 6.0 hours of flight training in the Bonanza.
- The Bonanza's complex systems and controls necessitated thorough training, which was not provided.
- The CFI who trained him in the Bonanza warned the pilot against flying in actual IFR conditions until he gained more experience, which he disregarded.

Transition Training and Proficiency Concerns

The transition training for the pilot in the Bonanza aircraft raised significant concerns regarding his proficiency and safety in instrument conditions.

- The CFI primarily used the aircraft flight manual and Garmin 530/430 flight manual supplements for training.
- No materials from The American Bonanza Society were utilized, which could have provided vital training information.
- The CFI admitted that the goal was not to establish proficiency in instrument conditions but to build visual flying experience.

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- He would not allow his grandchildren to fly with the pilot in actual instrument conditions, indicating concerns about his competence.
- The pilot had limited experience with the Bonanza's systems and was advised to gain more time before flying in instrument conditions.

Pilot Experience and Endorsements

The pilot's flight experience and endorsements were insufficient for operating the Bonanza safely.

- He had a high-performance endorsement from October 2012 but lacked a complex endorsement in his logbook until September 2, 2015.
- Insurance requirements mandated 50 hours in aircraft with retractable gear and 10 hours of flight instruction in the Bonanza, which the pilot did not meet.
- He had only 29 hours of flight time in retractable gear airplanes, far below the insurance requirements.
- Witnesses noted the pilot's lack of experience with the Bonanza and its systems.

Aircraft Specifications and Equipment

The Beechcraft A36 Bonanza had specific equipment and operational requirements that the pilot may not have fully understood.

- The aircraft was equipped with a KFC 200 Flight Control System and Garmin GNS 530W, which required familiarity for safe operation.
- The Garmin GNS 530W's navigation database was likely outdated, affecting its reliability for IFR flight.
- Portable navigation devices on board were not approved for IFR navigation, which could have led to reliance on unapproved equipment.

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Flight Planning and Weather Briefings

The pilot's flight planning and weather briefing practices were inadequate, contributing to unsafe flight decisions.

- He departed in dense fog without ATC clearance, which was deemed careless and risky by a previous passenger.
- The pilot's fuel planning was deficient, landing with only 8 gallons of usable fuel after a previous leg.
- He failed to obtain comprehensive weather briefings before departing, rushing through critical information.

Accident Sequence and Pilot Actions

The sequence of events leading to the accident highlighted the pilot's struggles with aircraft control and decision-making.

- The pilot attempted to fly direct to the PAGAN intersection instead of following ATC vectors, indicating a lack of situational awareness.
- He experienced an autopilot disconnect, leading to a loss of control during a critical phase of flight.
- Eyewitnesses reported the aircraft making sharp turns and descending rapidly before crashing, suggesting a stall or spin.

Analysis of Contributing Factors

Several factors contributed to the accident, including pilot error, inadequate training, and poor decision-making.

- The pilot was not instrument current and lacked the experience necessary for flying in IMC conditions.
- He failed to heed advice from his flight instructor regarding flying in actual instrument conditions.
- Hazardous attitudes, such as impulsivity and invulnerability, influenced his decision-making throughout the flight.

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- The pilot's reliance on automation and failure to manage fuel effectively were critical issues leading to the mishap.

Flight Planning and Fuel Management Issues

The flight from KSRQ to N79 was poorly planned, leading to critical fuel shortages and unsafe conditions.

- The pilot should have planned for a fuel stop with more reserve fuel.
- He could have selected a fuel stop with better weather conditions.
- He arrived in Greensboro with a dangerously low fuel supply, having only 0.5 gallons left at the time of the accident.
- The pilot had a history of poor fuel planning, evidenced by a previous flight where he nearly ran out of gas.

Uncoordinated Flight Maneuvers and Loss of Control

Uncoordinated flight during aggressive maneuvers likely contributed to a loss of control.

- Temporary “unporting” may have caused the engine to lose power while maneuvering.
- Eyewitness accounts and the pilot's inquiries about nearby fields support this conclusion.
- The calculated low fuel amount at the time of the incident aligns with the loss of control.

Failure to Utilize Autopilot Effectively

The pilot's improper use of the autopilot likely contributed to the accident.

- He failed to engage the autopilot properly, which could have helped maintain control during the approach.
- Lack of proficiency in using the autopilot's basic capabilities was evident.
- Reengaging the autopilot after a tight turn could have prevented the loss of control.

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Neglecting Checklist Usage During Flight

The pilot did not use checklists, which are essential for error prevention.

- Checklists are critical tools for pilots of all experience levels to avoid mistakes.
- Even professional pilots use checklists religiously, highlighting their importance in flight safety.

Inappropriate Aircraft Choice for Flight Conditions

The pilot should have flown a more familiar aircraft for the trip to Florida.

- The Bonanza's complexity and performance were unsuitable for the weather conditions encountered.
- He had significant experience with the Cherokee, which would have been a safer choice.
- Having an experienced instrument-rated pilot accompany him would have been prudent.

Delayed Request for Assistance from ATC

The pilot failed to seek help from Air Traffic Control (ATC) in a timely manner.

- Declaring an emergency could have prompted ATC to provide necessary assistance.
- He did not communicate his low fuel status or lack of instrument currency until it was too late.
- Acknowledging his situation earlier could have led to a safer outcome.

Summary of The pilot's Instrument Exam Weaknesses

The pilot exhibited several weaknesses in his instrument exam performance.

- He failed in critical areas such as calculating aircraft performance and interpreting ATC communications.

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- Weaknesses were highlighted in interpreting instrument approach procedures and VOR indications.
- The report indicates a pattern of deficiencies that contributed to the accident.

Fuel Burn and Flight Planning Data

Fuel burn data indicates significant discrepancies in flight planning.

- Average fuel burn was 18 gallons per hour, with a total of 76.5 gallons required for the flight.
- The pilot had only 68 gallons at takeoff, insufficient for the planned flight duration.
- The legal minimum fuel required was not met, leading to critical fuel shortages.