



National Transportation Safety Board Aviation Accident Final Report

Location:	Benton, KS	Accident Number:	DEN08FA059
Date & Time:	02/16/2008, 1845 CST	Registration:	N41LP
Aircraft:	Cessna 414A	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

According to witnesses, the airplane departed runway 35 and was observed flying in and out of the clouds. Several of the witnesses observed the airplane initiate a turn to the west. One witnesses commented that it was dark but he could still see the silhouette of the airplane. He observed the airplane descend below the trees. All of the witnesses reported flames and "fireballs." On scene evidence was consistent with the airplane impacting trees in a left turn. The airplane was destroyed. An examination of the airplane, flight controls, engines, and remaining systems revealed no anomalies. Weather observations and radar data depicted low clouds, and restricted visibility due to rain and mist, in the vicinity of the airport. Toxicological examination revealed cetirizine, an antihistamine, consistent with use within the previous 12 hours. Most studies have not found any significant impairment from the medication, though it is reported to cause substantial sedation in some individuals.

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 clearance from the trees. Contributing to the accident was the pilot's flight into known adverse weather conditions and the low clouds and visibility.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) FLIGHT INTO KNOWN ADVERSE WEATHER - ATTEMPTED - PILOT IN COMMAND
2. (F) WEATHER CONDITION - RAIN
3. (F) WEATHER CONDITION - LOW CEILING

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

4. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
5. USE OF INAPPROPRIATE MEDICATION/DRUG - PILOT IN COMMAND
6. OBJECT - TREE(S)

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

7. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On February 16, 2008, approximately 1845 central standard time, a Cessna 414A, N41LP, owned by Bajaj Holdings LLC, and piloted by a private pilot, was destroyed when it impacted terrain after departing Lloyd Stearman Field Airport (1K1), Benton, Kansas. A post impact fire ensued. Night instrument meteorological conditions prevailed at the time of the accident. The personal flight was being conducted under the provisions of Title 14 Code of Federal Regulations Part 91 without a flight plan. The private pilot and his passenger were fatally injured. The cross country flight was repositioning from 1K1 to Colonel James Jabara Airport, Wichita, Kansas (AAO) to pick up one additional passenger. The final destination was Austin, Texas.

The Butler County Sheriff's Department took witness statements from four individuals. The National Transportation Safety Board (Safety Board) Investigator in Charge (IIC) interviewed two witnesses and inspectors with the Federal Aviation Administration (FAA) interviewed two witnesses. These witnesses were located to the south, east, and west of the impact location. According to these witnesses, the airplane departed runway 35 (2,613 feet by 60 feet; asphalt). The airplane was observed flying in and out of the clouds. Several of the witnesses observed the airplane initiate a turn to the west. One witnesses commented that it was dark but he could still see the silhouette of the airplane. He observed the airplane descend below the trees. All of the witnesses reported flames and "fireballs."

PERSONNEL INFORMATION

The pilot, age 49, held a private pilot certificate with an airplane single-engine land, multiengine land, and instrument ratings, last issued on June 9, 2007. He was issued a third class airman medical certificate on May 16, 2007. The certificate contained the limitation "must wear corrective lenses."

The pilot's personal flight log was not located. At the time of application for airman medical certification, the pilot reported 380 total hours of flight experience. The pilot applied for insurance in December of 2007. At the time of application for insurance he reported a total time of 513 hours; 28 hours of which were in multiengine airplanes, and 86 hours of which were in actual and simulated instrument meteorological conditions.

In partial completion of a 50 hour experience requirement, imposed by the insurance company, the pilot flew with several local flight instructors to gain additional experience in the accident airplane. Several hours of ground instruction and 49.6 hours of flight instruction were reported by these local flight instructors. One instructor provided the pilot with a flight review and instrument proficiency endorsement upon the completion of their training.

The pilot also flew with USA Flight Training in Texas in the accident airplane. It was estimated that 16 hours of ground instruction and three hours of flight instruction were provided. After the completion of this training course, the pilot was provided with endorsements for a flight review and high altitude operations.

Based upon the flight experience reported to the insurance company and flight experience reported by local flight instructors it is estimated that the pilot had logged no less than 565 hours total time, 52 hours of which were in the accident airplane. It is also estimated that the

pilot had logged a total of 80 hours in multiengine airplanes. He had logged an estimated four hours of night experience and no less than two hours of instrument experience in the 90 days prior to the accident.

AIRCRAFT INFORMATION

The accident airplane, a Cessna 414A (serial number 414A0491), was manufactured in 1980. It was registered with the FAA on a standard airworthiness certificate for normal operations. The airplane was powered by two Teledyne Continental Motors engines rated at 335 horsepower at 2,700 rpm. Both engines were equipped with a three-blade, McCauley propeller.

The airplane was registered to Bajaj Holdings LLC, operated by the pilot, and was maintained under an annual inspection program. According to family and colleagues, the pilot kept the maintenance records in the airplane. The investigation revealed that maintenance was recently completed on the avionics of the accident airplane at Bevan-Rabell Inc., Wichita, Kansas, on February 7, 2008, at a Hobbs time of 1,248.6 hours.

Further investigation revealed that an annual inspection was performed by Yingling Aircraft, Inc., in Wichita, Kansas. The annual inspection was completed on December 7, 2007, at a "recorded time of 1,204.8 hours" and an "aircraft total time of 6,656.2 hours."

METEOROLOGICAL CONDITIONS

On February 15, 2008, at 2016, the pilot logged into the Direct User Access Terminal System (DUATS) and obtained a low altitude weather briefing for his proposed route of flight from AAO to Austin, Texas (AUS). Including the initial briefing, 17 different briefings were obtained by the pilot between February 15 and February 16. The last briefing was obtained on February 16, 2008, at 1752.

The pilot contacted the Columbia Flight Service Station (FSS) on February 16, 2008, at 1629. The pilot obtained a weather briefing for a flight departing Wichita (ICT), en route to AUS. The briefing lasted nearly 20 minutes and included discussion of en route icing and thunderstorms the flight may encounter, and the AIRMET for instrument conditions in the Wichita area. There was no mention of weather for 1K1 or AAO by the briefer and no request by the pilot. The pilot filed a flight plan from AAO to AUS, departing at 1900 with an en route altitude of 10,000 feet, and four passengers.

The pilot contacted the Columbia FSS on February 16 at 1806 for a follow-up briefing on the proposed flight. The briefing included discussions of the weather between AAO and AUS. The current conditions at AAO were not discussed. The pilot amended his flight plan to an altitude of 8,000 feet and three passengers instead of four.

The closest official weather observation station was Colonel James Jabara Airport (AAO), Wichita, Kansas, located five nautical miles (nm) west of the accident site. The elevation of the weather observation station was 1,412 feet mean sea level (msl). The routine aviation weather report (METAR) for AAO, issued at 1854, reported, winds 020 at 10 knots; visibility six miles in rain and mist; sky condition overcast 300 feet; temperature one degree Celsius (C); dewpoint zero degrees C; altimeter 29.64 inches. No official weather was available for 1K1.

Level II Doppler weather radar in Wichita (ICT), Kansas, (approximately 20 miles southwest of the accident location) scanned the accident area at 1846:32. Data indicated reflectivity values of 30 to 35 dBz.

According to the U.S. Naval Observatory - Astronomical Applications Department, the sun set at 1808; the end of civil twilight was recorded at 1835.

AIRPORT INFORMATION

Lloyd Stearman Field, is a public, uncontrolled airport (Class G airspace) located one mile southwest of Benton, Kansas, at 37 degrees, 46 minutes, 40.3 seconds north latitude and 97 degrees, 6 minutes, 48.6 seconds west longitude, at a surveyed elevation of 1,364 feet. Class E airspace initiated at an altitude of 700 feet above ground level (agl), directly above the airfield and at the surface, approximately one mile west of the airfield. The airport had one open runway, runway 17/35 (2,613 feet by 60 feet; asphalt).

WRECKAGE AND IMPACT INFORMATION

The accident site was located in an open field, just south of a line of trees, and railroad tracks. The accident site was at an elevation of 1,367 feet msl.

The initial impact point, as identified by the Safety Board IIC, was located towards the tops of several trees, approximately 4,500 feet northwest of the airport. Torn fiberglass consistent with the left winglet and red lens fragments were found in several trees and scattered on the ground directly below those trees. Several fresh broken tree branches were located on the ground below.

A second impact point was located in an open wheat/cornfield (546 feet southwest of initial impact point). Green lens fragments and torn fiberglass were located within the ground scar. A debris path extended from the second impact point to the main wreckage, along a magnetic bearing of 245 degrees. Torn metal and fiberglass, the right wing tip, a portion of the right wing, both gear doors, portions of both engine mounts, the left inboard flap, and both engine cowlings were located within the debris path.

Both propeller assemblies separated from their respective engines. The left propeller assembly included all three propeller blades. The blades were labeled "A", "B", and "C" for identification purposes only. Blade A was bowed aft 30 degrees, six inches outboard from the hub. The blade exhibited leading edge knicks and polishing. The tip of blade B was curled and the blade was bowed aft, exhibiting leading edge polishing and several knicks. Blade C was twisted slightly. The spinner on the left propeller assembly was torn and exhibited circular crushing.

The right propeller assembly included all three propeller blades. The blades were labeled "D", "E", and "F" for identification purposes only. Blade D exhibited S-bending and was bowed aft 20 degrees. The blade exhibited leading edge knicks, polishing and chordwise scratching. Blade E exhibited S-bending. Blade F exhibited S-bending and leading edge polishing. The outer nine inches of the tip was bent aft 90 degrees. The spinner on the right propeller assembly was crushed and torn.

The main wreckage came to rest 546 feet southwest of the initial impact point. The main wreckage consisted of the fuselage, empennage, portions of the left and right wings, and both engine assemblies. The left wing, to include the left engine, outboard flap, and aileron, came to rest inverted, under the fuselage of the airplane. The leading edge of the left wing was crushed aft and torn. The wing was charred, melted, and partially consumed by fire.

The right wing separated from the fuselage and came to rest southwest of the main wreckage. The landing gear assembly appeared to be down and locked. The flaps and aileron separated from the wing assembly.

The empennage, to include the horizontal stabilizer, vertical stabilizer, rudder, and elevator, separated partially from the fuselage. The vertical stabilizer and rudder were covered in mud but otherwise unremarkable. The outboard 25 inches of the left horizontal stabilizer was bent and wrinkled. The elevator on the left side separated at the outboard attach point and was bent at midspan. The trailing edge of the right side horizontal stabilizer was wrinkled. The elevator tip was bent down and the leading edge was wrinkled.

Control continuity was confirmed for all primary flight controls. The rudder trim was measured at 2.0 inches; according to Cessna this is consistent with zero degrees. The elevator trim was measured at 0.7 inches; according to Cessna this is consistent with 15 degrees tab down (nose up). The aileron trim was measured at 0.6 inches; according to Cessna this is consistent with zero degrees.

The fuselage, to include the cabin, six seat assemblies, and the instrument panel, came to rest on an approximate heading of 200 degrees. The upper portion (roof) of the fuselage was destroyed. The instrument panel was charred, melted, and partially consumed by fire. The front two seats in the cabin were destroyed. The aft four seats were charred, melted, and partially consumed by fire.

Both engines were examined revealing signs of normal operation.

MEDICAL AND PATHOLOGICAL INFORMATION

The autopsy on the pilot was performed by the Sedgwick County Regional Forensic Science Center - Coroner Division, Wichita, Kansas, on February 18, 2008, as authorized by the Butler County Coroner's office. The autopsy revealed the cause of death as blunt force trauma.

During the autopsy, specimens were collected for toxicological testing to be performed by the FAA's Civil Aerospace Medical Institute, Oklahoma City, Oklahoma (CAMI Reference #200899931001). Tests for carbon monoxide and ethanol were negative. Cetirizine was detected in the blood and urine and 0.8 ug/ml of cyanide was detected in the blood. Cetirizine is an antihistamine, often known by the trade name Zyrtec, that became available without a prescription in January 2008.

According to the pilot's application for third class medical certification in May of 2005, he indicated "yes" in response to "hay fever or allergy." He indicated "no" in response to current use of any medication. There was no further information in the FAA medical records regarding the pilot's allergies and no indication that further information was requested. According to the most recent application for third class medical certification in May of 2007, he indicated "no" in response to current use of medications and hay fever or allergy.

ADDITIONAL INFORMATION

According to Title 14 Code of Federal Regulations Part 91.15 (a) "no person may operate an aircraft under VFR" at night in class G airspace unless they remain 500 feet below the clouds, when operating below 1,200 feet above ground level.

Pilot Information

Certificate:	Private	Age:	49, Male
Airplane Rating(s):	Multi-engine Land; 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:	Yes
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	05/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	01/01/2008
Flight Time:	565 hours (Total, all aircraft), 52 hours (Total, this make and model), 52 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N41LP
Model/Series:	414A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	414A0491
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	12/01/2007, Annual	Certified Max Gross Wt.:	6785 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	6656.2 Hours as of last inspection	Engine Manufacturer:	Teledyne Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	TSIO-520-K
Registered Owner:	On file	Rated Power:	335 hp
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night
Observation Facility, Elevation:	AAO, 1421 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	1654 CST	Direction from Accident Site:	270°
Lowest Cloud Condition:	Thin Overcast / 300 ft agl	Visibility	6 Miles
Lowest Ceiling:	Overcast / 300 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.64 inches Hg	Temperature/Dew Point:	1° C / 0° C
Precipitation and Obscuration:	Moderate - Rain; Mist		
Departure Point:	Benton, KS (1K1)	Type of Flight Plan Filed:	None
Destination:	Wichita, KS (AAO)	Type of Clearance:	None
Departure Time:	1845 CST	Type of Airspace:	

Airport Information

Airport:	Lloyd Stearman Field Airport (1K1)	Runway Surface Type:	Asphalt
Airport Elevation:	1364 ft	Runway Surface Condition:	Wet
Runway Used:	35	IFR Approach:	None
Runway Length/Width:	2613 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	37.787500, -97.125556

Administrative Information

Investigator In Charge (IIC):	Jennifer S Kaiser	Report Date:	08/28/2008
Additional Participating Persons:	Joseph Gonsalves; FAA Flight Standards District Office; Wichita, KS Jan Smith; Cessna Aircraft; Wichita, KS Christopher Lang; Teledyne Continental Motors; Mobile, AL		
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).