



# Aviation Investigation Final Report

<b>Location:</b>	TITONKA, Iowa	<b>Accident Number:</b>	CHI99FA284
<b>Date &amp; Time:</b>	August 8, 1999, 13:05 Local	<b>Registration:</b>	N5033G
<b>Aircraft:</b>	Bellanca 7GCAA	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot attempted a low-level pass over a relative's residence and impacted a pine tree that was located in the front yard. The right elevator, right stabilizer, right wing struts, and right wing separated from the fuselage during and subsequent to the collision with the pine tree. No anomalies were found with the airplane or its engine.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The low altitude maneuver attempted and altitude/clearance not being maintained by the pilot, which resulted in an impact with a pine tree. A factor to the accident was the pine tree.

## Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: MANEUVERING

### Findings

1. (F) OBJECT - TREE(S)
2. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
3. (C) LOW ALTITUDE FLIGHT/MANEUVER - ATTEMPTED - PILOT IN COMMAND
4. HORIZONTAL STABILIZER - SEPARATION
5. WING, BRACING STRUT - SEPARATION
6. FLT CONTROL SYST, ELEVATOR CONTROL - SEPARATION
7. WING - SEPARATION

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### HISTORY OF FLIGHT

On August 8, 1999, at 1305 central daylight time, a Bellanca 7GCAA, N5033G, piloted by a private pilot, was destroyed during an in-flight collision with a pine tree and terrain near Titonka, Iowa. Visual meteorological conditions prevailed at the time of the accident. The personal flight was operating under the provisions of 14 CFR Part 91 and was not on a flight plan. The pilot, the sole occupant, was fatally injured. The flight departed the Algona Municipal Airport, Algona, Iowa, at exact time unknown and was en route to the Owatonna Municipal Airport, Owatonna, Minnesota.

Relatives of the pilot, and witnesses to the accident, described the airplane approaching their residence from the east, at an altitude lower than a set of transmission wires that were along a road near their property. The witnesses stated that as the airplane passed over their house they heard the airplane impact the top of an evergreen tree in their front yard. The airplane impacted a level cornfield approximately 100 yards west of the residence.

### PERSONNEL INFORMATION

According to Federal Aviation Administration (FAA) records, the pilot was a holder of a private pilot certificate with a single engine land rating. FAA records indicated that the pilot was issued a third class medical certificate with no limitations or restrictions on July 3, 1998. At his last FAA medical examination, the pilot reported his total flight time was 150 hours.

### AIRCRAFT INFORMATION

The aircraft was a Bellanca 7GCAA, N5033G, serial number 368-78. The Bellanca 7GCAA is a production built, dual strutted high-wing airplane consisting of a fabric covered steel-tube fuselage and a fabric covered wing. The Bellanca 7GCAA has a fixed landing gear and can accommodate a pilot and a single passenger. The FAA issued a Standard Airworthiness Certificate for the airplane on October 25, 1978. The airplane had logged a total time of 3417.6 hours at the last annual inspection dated November 9, 1998. The airplane had logged a total time of 3475.4 hours at the time of the accident.

The engine was a Lycoming O-320-A2D, serial number L-48428-27A, and at the time of the accident had accumulated 1,455 hours since overhaul.

### WRECKAGE AND IMPACT INFORMATION

Examination of the residence property revealed severed pine tree branches near a base of a

pine tree located in the front yard.

Post examination of the wreckage revealed the right horizontal stabilizer, right portion of the elevator, right wing-struts, and right wing separated from the airplane during and subsequent to the impact with the tree. The right portion of the elevator and one of the right wing struts were found in the side yards of the residence. The right wing, right horizontal stabilizer, and the remaining right wing-strut were found in a cornfield west of the residence. Examination of the main wreckage revealed severed pine tree branches and needles underneath the engine cowling and in the forward cockpit area.

No anomalies were found with the airplane or its systems that could be associated with a preexisting condition.

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#### MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was conducted on August 9, 1999 at the Mercy Medical Center, Mason City, Iowa.

Federal Aviation Administration Forensic Toxicology Fatal Accident Report indicated that the pilot tested positive for Acetaminophen, with a level of 65 ug/ml, ug/g detected.

#### ADDITIONAL INFORMATION

A party to the investigation was the Federal Aviation Administration Flight Standards District Office, Des Moines, Iowa.

The wreckage was released to the Kossuth County Sheriff on August 9, 1999.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	July 3, 1998
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	150 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bellanca	<b>Registration:</b>	N5033G
<b>Model/Series:</b>	7GCAA 7GCAA	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	368-78
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	November 9, 1998 Annual	<b>Certified Max Gross Wt.:</b>	1650 lbs
<b>Time Since Last Inspection:</b>	58 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3475 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>		<b>Engine Model/Series:</b>	O-320-A2D
<b>Registered Owner:</b>	ALBERT LEA AIRPORT INC.	<b>Rated Power:</b>	150 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	MCW ,1213 ft msl	<b>Distance from Accident Site:</b>	32 Nautical Miles
<b>Observation Time:</b>	12:53 Local	<b>Direction from Accident Site:</b>	98°
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	15 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	300°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	20°C / 12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	ALGONA , IA (AXA )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	OWATONNA , IA (OWA )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	00:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	43.229187,-94.039741(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Fox, Andrew
<b>Additional Participating Persons:</b>	TERRY WARREN; DES MOINES , IA
<b>Original Publish Date:</b>	May 17, 2001
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=47084">https://data.nts.gov/Docket?ProjectID=47084</a>

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](#).