



Aviation Investigation Final Report

Location:	CEDAR HILLS, Missouri	Accident Number:	CHI98LA143
Date & Time:	May 10, 1998, 14:30 Local	Registration:	N5482E
Aircraft:	ALON A-2	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses reported the airplane was circling a home at an altitude between 700 and 1,000 feet above the ground. One witness said the airplane was losing altitude while it was maneuvering. Another witness said the airplane was '...flying at a slow rate of speed, making [an] approximate 30-degree turn. The engine was running when the right wing stalled, turning the airplane upside down. The plane then nose dived to the ground.' The toxicological report reported 112 (mg/dL, mg/hg) of Ethanol was detected in the pilot's urine sample. The report stated that 84 (mg/dL, mg/hg) of ethanol was detected in the vitreous fluids examined. No mechanical anomalies were found with the engine, airframe or control system that would prevent normal flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of the pilot to maintain airplane control due to alcohol impairment.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. (C) IMPAIRMENT(ALCOHOL) - PILOT IN COMMAND

3. REMEDIAL ACTION - NOT PERFORMED - PILOT IN COMMAND

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

Findings

4. TERRAIN CONDITION - GROUND

Factual Information

On May 10, 1998, at 1430 central daylight time (cdt), an Alon A-2, N5482E, piloted by a private pilot, was destroyed during a collision with the ground and post-impact fire. The 14 CFR Part 91 personal flight was not operating on a flight plan. Visual meteorological conditions prevailed at the time of the accident. The pilot and passenger were fatally injured. The flight departed Columbia, Illinois, at 1410 cdt.

The Jefferson County Missouri, Sheriff's Department deputy conducted interviews with witnesses who observed the airplane's maneuvering, descent, and ground collision. According to the deputy's report, the pilot's son said his father circled his home three times. He said that when the third circle was in process, the engine began to "...cut out and miss." According to the report, the pilot's son said his father was having trouble keeping the airplane in the air. The son said his father's airplane passed over his home, turned sideways, struck trees near his home and crashed onto the ground.

One witness said, "The plane appeared to be having trouble climbing in the air." As the airplane passed over the son's home, the witness said it "...banked turning sideways." According to the witness, the airplane was losing altitude as it circled the home for the last time. Another witness said N5482E "...circled the property several times, each time it got lower. On the last pass it hit the tops of my trees then crashed."

A third witness said the airplane was "...flying under 1,000 feet, flying at a slow rate of speed, making [an] approximate 30- degree turn. The engine was running when the right wing stalled, turning the plane upside down. The plane then nose dived to the ground." The last witness statement said the airplane was "...circling about 700 to 800 feet above when in a banking turn he seemed to lose it. The plane kind of did a nose dive."

The Federal Aviation Administration Principal Maintenance Inspector examined N5482E's wreckage. He stated there were no mechanical anomalies with the engine, airframe, or flight control system that would have prevented normal flight.

The Federal Aviation Administration's Civil Aeromedical institute conducted a toxicological examination on the pilot. According to their report there was no carbonmonoxide, drugs, or cyanide in the toxicological samples examined. The report stated there was 112 (mg/dL), mg/hg) ETHANOL detected in the urine, 84 (mg/dL, mg/hg) ETHANOL was detected in the vitreous fluids, 37 (mg/dL, mg/hg) ETHANOL was detected in the blood sample, 5 and 43 (mg/dL, mg/hg) ACETALDEHYDE was detected in the urine and blood respectively.

The pilot's autopsy was conducted by Dr. Mary Case, Chief Medical Examiner, Jefferson County, Missouri.

Pilot Information

Certificate:	Private	Age:	71, Male
Airplane Rating(s):	Single-engine land	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-w/ waivers/lim	Last FAA Medical Exam:	December 8, 1997
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	4600 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ALON	Registration:	N5482E
Model/Series:	A-2 A-2	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:		Serial Number:	A-16
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1450 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	CONTINENTAL
ELT:		Engine Model/Series:	C-90
Registered Owner:	RAYMOND A. HEBERER	Rated Power:	90 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	STL ,605 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	13:53 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:	Unknown	Visibility	10 miles
Lowest Ceiling:	Broken / 4800 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 17 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	24°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	COLUMBIA , IL (H49)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	14:10 Local	Type of Airspace:	Class G

Airport Information

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

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:	38.350776,-90.639877(est)

Administrative Information

Investigator In Charge (IIC):	Gattolin, Frank
Additional Participating Persons:	THOMAS RUSSELL; ST. ANN , MO
Original Publish Date:	April 6, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=10868

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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](#).