



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	BLOOMINGBURG, OH	<b>Accident Number:</b>	BF094FA086
<b>Date &amp; Time:</b>	06/02/1994, 1945 EDT	<b>Registration:</b>	N7972F
<b>Aircraft:</b>	CESSNA 150F	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

THE PILOT HAD RETURNED AFTER AN UNEVENTFUL 40-MINUTE FLIGHT WITH A PASSENGER. ABOUT 15 MINUTES LATER, AFTER THE PASSENGER HAD DISEMBARKED, THE PILOT TOOK OFF AGAIN. WITNESSES OBSERVED THE AIRPLANE'S TAKEOFF ROLL AND REPORTED NOTHING UNUSUAL. DURING THE INITIAL CLIMB, THE AIRPLANE WAS OBSERVED TO DRIFT TO THE LEFT AND SUDDENLY PITCH DOWN AS ITS WINGS ROCKED BACK AND FORTH. THE AIRPLANE STALLED AND DESCENDED INTO TERRAIN IN A NOSE-DOWN ATTITUDE. AN EXAMINATION OF THE WRECKAGE DID NOT REVEAL ANY EVIDENCE OF PRE-IMPACT MECHANICAL MALFUNCTIONS OR FAILURES. AT THE TIME OF THE ACCIDENT, THE SUN WAS POSITIONED NEAR THE DIRECTION OF THE TAKEOFF.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FAILURE OF THE PILOT-IN-COMMAND TO MAINTAIN ADEQUATE AIRSPEED. THIS LED TO A STALL DURING THE INITIAL TAKEOFF AND CLIMB AT AN ALTITUDE THAT DID NOT PERMIT A RECOVERY. A FACTOR RELATED TO THE ACCIDENT WAS THE PRESENCE OF SUNGLARE DURING THE TAKEOFF, WHICH RESTRICTED VISUAL CUES.

## Findings

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Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (F) LIGHT CONDITION - SUNGLARE
2. (C) AIRSPEED - INADEQUATE - PILOT IN COMMAND
3. STALL/SPIN - INADVERTENT
4. REMEDIAL ACTION - NOT POSSIBLE

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

### Findings

5. TERRAIN CONDITION - OPEN FIELD

## Factual Information

### HISTORY OF FLIGHT

On June 2, 1994, about 1945 hours eastern daylight time, N7972F, a Cessna 150F, operated by the owner/pilot, impacted terrain in Bloomingburg, Ohio, during an uncontrolled descent following takeoff from a private grass airstrip. The airplane was destroyed. The certificated private pilot, the sole occupant, was fatally injured. Visual meteorological conditions prevailed and a flight plan was not filed. The local flight departed from the pilot's private grass strip in Bloomingburg and was conducted under 14 CFR 91.

According to witnesses, the pilot had just given a 40-minute airplane ride to a friend and landed the airplane after an uneventful flight. The friend stated that the pilot "... seemed satisfied everything was fine during the entire flight" and that "... the weather conditions were perfect." About 15 minutes later, after the friend had disembarked, the pilot was observed taking off again. The friend was standing outside next to the pilot's wife at the time of the takeoff. According to the pilot's wife,

Everything seemed fine with the takeoff. I saw [the airplane] become airborne and start to climb. [There was] nothing unusual about anything that would have got my attention. I looked away and then about 20 seconds later I heard [my son] yell about the crash. Nothing unusual about engine sounds got my attention.

Both witnesses reported that they could not discern what the engine sounded like during the climbout, because a motorized bicycle was operating near them.

The son of the pilot is the only known person to observe the entire accident sequence. He was riding the motorized bicycle when he saw the airplane lift off from the grass strip. He stated that the airplane climbed to about 70 feet above the ground, or three times the height of the radio antenna mounted next to his house. He then saw the airplane drift to the left, suddenly nose over and descend into the ground. He also stated that the wings were "... rocking back and forth" as it descended.

He was given a model of an airplane and simulated the wing rocking.

The pilot's son also stated that he did not recall hearing any unusual engine noises from the airplane, but he was also exposed to the sound of the motorcycle that he was riding. He also did not recall observing anything unusual about the airplane as it was climbing, and he did not see any smoke or fire trailing from the airplane.

The airplane impacted nose-down into a plowed corn field located about 225 feet north of the departure end of the runway, and about 335 west of the extended runway centerline. The airplane was destroyed. There was no fire.

The accident occurred during the hours of daylight at 39 degrees 38.69 minutes North, and 83 degrees 23.37 minutes West.

### PERSONNEL INFORMATION

The pilot, age 49, was a certificated private pilot with a rating for single-engine land airplanes. According to FAA records, the pilot was issued an FAA Third Class Medical Certificate on September 2, 1993, with no limitations. The pilot's logbook was recovered and indicated that the pilot had logged total of 479 hours, including 390 hours in type. The logbook

also indicated that the pilot had logged 11 flight hours in type during the 30 days preceding the accident.

#### AIRCRAFT INFORMATION

The airplane, a 1966 Cessna 150, was owned and operated by the pilot. It was kept outside on the pilot's property. The pilot operated that airplane with automotive fuel purchased from a local automotive gasoline station.

An examination of the airplane's engine and airframe logbooks, and the pilot's personal airplane record, did not reveal any unresolved discrepancies prior to the accident flight. The logbooks indicated that the airframe had accumulated a total of 4,202 flight hours. It had received an annual inspection on November 14, 1993, about 53 hours prior to the accident flight. The engine, a Continental O-200-A, had accumulated 3,049 total operating hours, including 1,802 since it's last major overhaul.

#### METEOROLOGICAL INFORMATION

Witnesses at the accident characterized the weather conditions as "perfect" and "fine." The recorded wind speed at the Port Columbus International Airport, located 30 miles from the accident site, about the time of the accident were winds from 300 degrees magnetic at 7 knots. The departure runway was oriented along a magnetic bearing of 320 degrees.

According to a Safety Board computer program used to determine sun and moon information, the sun was located along a magnetic bearing of 293 degrees and at an altitude of 12.1 degrees from the horizon at the time of the accident.

#### WRECKAGE AND IMPACT INFORMATION

The airplane wreckage was examined at the accident site on June 3, 1994. An additional examination occurred on June 4, 1994, at the Fayette County Airport, Washington Court House, Ohio, after the wreckage had been moved.

The entire airplane was found in a nose-down position within the confines of its own dimensions. The magnetic bearing of the airplane's longitudinal axis was about 360 degrees. The airplane was embedded in the ground at an angle of about 50 degrees from the horizon. The tailcone was partially separated and resting on the ground. There was no evidence of fire.

All primary and secondary flight control surfaces were accounted for at the accident site. No evidence was found to indicate a flight control deficiency. The leading edges of both wings of the airplane exhibited evidence of crush damage. The engine was crushed upward into the cockpit. The engine and propeller remained attached to the airframe and were embedded in the ground in a nose-down attitude.

The electrically-driven flap actuator mechanism was examined; the examination revealed that the flaps were in the fully retracted position.

Both wing fuel tanks were intact and several gallons of fuel were found inside. A sample of the fuel was taken and sent for analysis. The report of analysis (attached) indicated that the fuel was automotive gasoline with an alcohol additive. No water or other contaminants were present. The fuel mixture control was found in the full rich position. The fuel selector valve was found in the ON position. The fuel primer knob was in the locked position.

An examination of the cockpit controls revealed the following: About 2.7 inches of the

throttle control shaft protruded from the panel and was bent downward. The control yoke column was found in the full aft position. The vertical speed indicator read 1,650 feet per minute rate of descent. The magneto switch was selected to BOTH, and the electrical master switch was in the OFF position.

The engine and propeller were examined. No holes were found in the crankcase. The bottom of the engine exhibited crush damage and the oil sump was deformed. About two quarts of oil drained out of the sump; no contamination was noted. The oil screen was removed and examined; light metal shavings were present. Six sparkplugs were removed; all six contained a black wet oil residue on their electrodes.

The propeller could be rotated through 360 degrees of rotation. Crankshaft drive and valve train continuity was verified for all four cylinders during propeller rotation. The number 1 cylinder barrel assembly was removed and the interior of the engine was visible. No evidence of heat distress was found. Continuity of all connecting rods was verified.

A compression check was performed on the engine during propeller rotation; all four cylinders produced compression.

Both magnetos could be freely rotated and produced a spark when rotated. Both impulse couplings engaged when rotated.

The carburetor was separated from the intake manifold assembly and was partially attached to the engine. The throttle linkage was connected to the carburetor but separated at impact. The carburetor heat control was found in the closed (cold) position. The mixture control was found against the full rich stops. The throttle butterfly valve was in the closed position. The carburetor was disassembled and examined. The floats, venturi, jet and accelerator pump were intact. The carburetor bowl was empty and wet with fuel. The carburetor fuel screen was removed and examined; it was also wet with fuel and did not exhibit any evidence of contamination.

The two-bladed McCauley metal propeller was examined. One blade exhibited evidence of some leading edge polishing and S-bending on the outboard 8 inches. The other blade exhibited evidence of some leading edge polishing and some chordwise scratching. This blade was bent aft about 30 degrees at its midspan.

#### MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by Dr. Patrick M. Fardal, M.D., of the Franklin County Coroners Office, Columbus, Ohio, on June 3, 1994. According to the autopsy report, the cause of death was "multiple blunt force injuries."

A toxicological analysis was performed on specimens taken from the pilot by the FAA Civil Aeromedical Institute (CAMI), Oklahoma City, Oklahoma. According to the toxicological report dated December 22, 1994, 0.318 ug/mL atropine was detected in the blood, and 0.727 ug/mL atropine was detected in the lung. No evidence of atropine was detected in the specimens from the liver, spleen, or brain. According to Dr. Dennis V. Canfield of CAMI, atropine is a drug used by medical professionals for the revival of injured victims. Dr. Canfield stated that because no atropine was detected in the liver, spleen, or brain, the intrusion of the drug occurred after the accident.

#### ADDITIONAL INFORMATION

The aircraft wreckage was released to Mr. Mitch Zehr, Midwestern Regional Claims Representative, Loss Management Services, representing the aircraft's registered owner, on June 6, 1994.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	49, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<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>	09/02/1993
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	479 hours (Total, all aircraft), 390 hours (Total, this make and model), 429 hours (Pilot In Command, all aircraft), 34 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N7972F
<b>Model/Series:</b>	150F 150F	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal; Utility	<b>Serial Number:</b>	15064072
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	11/14/1993, Annual	<b>Certified Max Gross Wt.:</b>	1600 lbs
<b>Time Since Last Inspection:</b>	53 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4202 Hours	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-200-A
<b>Registered Owner:</b>	CRAIG, DAVID M.	<b>Rated Power:</b>	100 hp
<b>Operator:</b>	CRAIG, DAVID M.	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CMH, 816 ft msl	Distance from Accident Site:	25 Nautical Miles
Observation Time:	1850 EDT	Direction from Accident Site:	20°
Lowest Cloud Condition:	Scattered / 12000 ft agl	Visibility	15 Miles
Lowest Ceiling:	Broken / 25000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	20° C / 4° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1945 EDT	Type of Airspace:	Class G

## Airport Information

Airport:		Runway Surface Type:	Grass/turf
Airport Elevation:	1000 ft	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	
Runway Length/Width:	2120 ft / 80 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	JEFFREY B GUZZETTI,	Report Date:	01/26/1995
Additional Participating Persons:	ERIC APONTE; CINцинATTI, OH GEORGE HOLLINGSWORTH; RESTON, VA		
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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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](#).