



National Transportation Safety Board Aviation Accident Final Report

Location:	SPRINGBORO, OH	Accident Number:	IAD96FA100
Date & Time:	06/19/1996, 0810 EDT	Registration:	N62852
Aircraft:	Piper PA-31-325	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The parents of the pilot/owner stated that he arrived late in the afternoon prior to the accident. They stayed up with their son until approximately 0100 the morning of the accident. They stated that their son was a doctor and kept a busy schedule. The son told the parents that he had to fly back in order to have new fuel cells installed in the airplane and to work at his clinic. The pilot was airborne by 0700. The weather at his destination had low ceilings and fog restricting the visibility. The pilot was cleared by ATC to fly the localizer approach to the runway. The pilot called his position at the outer marker on the unicom frequency and no further transmissions were heard. Witnesses on the airport heard and saw the bottom of the airplane and stated that the airplane's engines sounded normal as it went overhead. Radar data showed that the airplane's altitude fluctuated and ground speed decreased significantly during the missed approach flight path. The airplane impacted the ground in approximately 40-degree nose-low, right wing down attitude. The toxicology report revealed 0.005 ug/ml Tetrahydrocannabinol (Marihuana) in the blood, and 0.013 ug/ml and 0.017 ug/ml Tetrahydrocannabinol Carboxylic Acid (Marihuana) in the blood and kidney fluid respectively.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's impairment of judgment and performance due to drugs which led to spatial disorientation and a loss of aircraft control. The weather was a factor.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MISSED APPROACH (IFR)

Findings

1. (F) WEATHER CONDITION - FOG
2. (F) WEATHER CONDITION - LOW CEILING
3. (C) AIRCRAFT CONTROL - UNCONTROLLED - PILOT IN COMMAND
4. (C) SPATIAL DISORIENTATION - PILOT IN COMMAND
5. (C) IMPAIRMENT(DRUGS) - PILOT IN COMMAND

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

Factual Information

HISTORY OF FLIGHT On June 19, 1996, at 0807 eastern daylight time, a Piper PA-31-325, N62852, impacted the ground while executing a missed approach after a localizer approach to runway 20 at the Wright Brothers Memorial Airport, Dayton, Ohio. The private pilot/owner, the sole occupant, was fatally injured and the airplane was destroyed. The flight originated at approximately 0700 eastern daylight time from the Andrews University Airpark in Berrien Springs, Michigan. An instrument flight plan had been filed and instrument meteorological conditions prevailed for the flight. The flight was conducted under 14 CFR Part 91.

The parents of the private pilot/owner, stated that they drove their son to their home shortly after he arrived at Andrews University Airpark, late in the afternoon on the day prior to the accident. They stated that they stayed up with their son until approximately 0100 on the morning of the accident. The parents stated that their son, who was a doctor, told them that he had to be back in Dayton, Ohio to have new fuel cells installed in the airplane and that he had appointments that morning at his clinic. The private pilot took off at 0700 that morning.

Upon his arrival in the local area, the FAA Air Traffic Controller cleared the pilot for a Localizer approach to runway 20 and switched the pilot to the unicom frequency. A witness stated that he was standing at the flight operations desk at the airport and heard the pilot report on the unicom frequency that he was at "TALAC", which is the final approach fix for the Localizer approach to runway 20. The witness stated that because of the fog and low ceilings, he went outside to see if the airplane made it into the airport. This witness stated that he never saw the airplane from where he was standing, but the sound of the airplane appeared to be coming from directly over the terminal building. In his statement, the witness said that he called the Automated Surface Observation System, which was new to the airport and being tested at the time of the accident. At the time the call was placed, the ASOS recorded the ceiling as 100 feet and the visibility as 3/4 of a mile. Other witnesses stated that they were barely able to see the bottom of the airplane as it flew overhead near the terminal. All witnesses stated that the engines sounded normal when the airplane flew by.

The missed approach instructions for the Localizer approach to runway 20 are to climb to 2500 feet and then a left turn via Midwest VHF Omni-Directional Range (VOR) to intercept the 292 radial to PETRO intersection and hold. The radar data reviewed showed that the airplane passed the airport at a time of approximately 0805:05 locally, at which time the airplane's altitude dropped slightly from the minimum descent altitude and then showed an erratic climb to 2500 feet followed quickly by a 500 foot drop shown on the last radar return at 0806:24. During this same interval, the airplane's ground speed steadily decreased until the last radar return showed the airplane's ground speed below 50 knots. A positional plot of the airplane through this interval showed the airplane heading in a southerly direction until it reversed course with a very small ground radius turn, and was heading in the opposite direction at 0806:10. Radar contact with the airplane was lost at 0806:24.

PERSONNEL INFORMATION The pilot's logbook showed that he obtained his private pilot's license in April, 1992 in a single engine land airplane. The logbook showed that he obtained his instrument rating in November, 1992 and then received his multi-engine land rating in May, 1993. Once the multi-engine land rating was obtained, the pilot flew approximately 90% of his flight time in the accident airplane.

The pilot's logbook showed that a Biennial Flight Review was conducted in May, 1995, with

three simulator flights and two actual flights completed before the instructor signed the logbook. The flight instructor who administered the Biennial Flight Review stated that he would not sign off the pilot's instrument competency due to the pilot's performance during the simulators and flights. The logbook showed that two weeks later at another airport in a different state, the private pilot took an instrument competency flight in a non complex single engine airplane only.

AIRCRAFT INFORMATION The airplane's certification and registration were current. The airplane was maintained in accordance with the appropriate Federal Air Regulations. No anomalies were found in the engines' and airframe logbooks. **METEOROLOGICAL CONDITIONS** The weather obtained from the automated surface observation system located on the Wright Brothers Memorial Airport, which was under testing at the time of the accident, recorded the local weather as being: Measured 100 feet overcast; visibility- 1 mile fog; temperature- 71 degrees Fahrenheit; dewpoint- 70 degrees Fahrenheit; winds- 190 degrees at 4 knots; altimeter-29.85.

WRECKAGE AND IMPACT INFORMATION The ground scars created by the airplane indicate that the right wing impacted the ground initially, sending engine nacelle doors and other debris in a 340 degree magnetic bearing and a distance of 40 to 150 feet from the wreckage. The fuselage came to rest facing a magnetic heading of 160 degrees. The wreckage indicated that the airplane hit the ground in approximately 40 degree nose low, right wing down attitude, and was consumed by fire shortly after impact.

The airplane wreckage was resting on the bottom of the fuselage with its wings still attached but destroyed by fire. The cabin and cockpit area were destroyed by fire. The empennage was intact but sustained impact and fire damaged. The engines were partially buried with the propellers still attached. An on scene examination of the remaining airframe showed no abnormalities. The engines were removed and examined at a nearby airport. Continuity in both engines was confirmed with no anomalies found.

MEDICAL AND PATHOLOGICAL INFORMATION A postmortem examination was performed at the Montgomery County Ohio Coroner's Office on June 19, 1996 at 1145 a.m. The examination was conducted by Lee D. Lehman, Ph.D., MD, Deputy Coroner.

A Forensic Toxicology Fatal Accident Report was conducted by the Federal Aviation Administration, U.S. Department of Transportation, Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma. The report was signed by Dennis V. Canfield, Ph.D., Manager Toxicology and Accident Research Laboratory. Immunoassay and chromatography were used to screen for abused drugs. GC/Mass Spec, or GC/FTIR, is used to confirm most positive results. The results were as follows: * 0.005 ug/ml Tetrahydrocannabinol (Marihuana) detected in Blood * 0.013 ug/ml Tetrahydrocannabinol Carboxylic Acid (Marihuana) detected in Blood * 0.017 ug/ml Tetrahydrocannabinol Carboxylic Acid (Marihuana) detected in Kidney Fluid

ADDITIONAL INFORMATION The wreckage was release to David E. Pearson of Aviation Adjusting Associates of Mount Vernon, Ohio on June 21, 1996.

Pilot Information

Certificate:	Private	Age:	41, 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 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/26/1995
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	1198 hours (Total, all aircraft), 701 hours (Total, this make and model), 1150 hours (Pilot In Command, all aircraft), 39 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N62852
Model/Series:	PA-31-325 PA-31-325	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	31-7612089
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	06/12/1996, Annual	Certified Max Gross Wt.:	6500 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	3252 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	TIO-540-F2BD
Registered Owner:	THOMAS J. MULLIN	Rated Power:	310 hp
Operator:	THOMAS J. MULLIN	Operating Certificate(s) Held:	None
Operator Does Business As:	HI HAT LEASING INC	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	DAY, 1009 ft msl	Distance from Accident Site:	18 Nautical Miles
Observation Time:	1151 EDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	1.25 Miles
Lowest Ceiling:	Overcast / 400 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	22° C / 22° C
Precipitation and Obscuration:			
Departure Point:	BERRIEN SPRINGS, MI (C20)	Type of Flight Plan Filed:	IFR
Destination:	DAYTON, OH (MGY)	Type of Clearance:	IFR
Departure Time:	0700 CDT	Type of Airspace:	Class E

Airport Information

Airport:	WRIGHT BROTHERS AIRPORT (MGY)	Runway Surface Type:	Asphalt
Airport Elevation:	962 ft	Runway Surface Condition:	Dry
Runway Used:	20	IFR Approach:	Localizer Only
Runway Length/Width:	4981 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	JAMES J CAIN	Report Date:	03/31/1998
Additional Participating Persons:			
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 pubinq@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](#).