



Aviation Investigation Final Report

Location:	DEFIANCE, Ohio	Accident Number:	NYC94FA067
Date & Time:	March 19, 1994, 13:55 Local	Registration:	N1576T
Aircraft:	CESSNA 414	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

JUST PRIOR TO THE ACCIDENT THE AIRPLANE WAS SEEN ON FINAL APPROACH FLYING IN AN ERRATIC MANNER AT A LOW ALTITUDE. TWO WITNESSES RIDING IN A CAR WROTE THEY SAW THE AIRPLANE, 'GOING UP AND DOWN TOWARD THE GROUND. WE COULD HEAR A FAINT CLICKING NOISE, AND THE PROPELLERS WERE GOING AROUND SLOWLY.' THE WITNESSES SAW THE AIRPLANE TAKE 'A SHORT NOSEDIVE AND CRASHED.' THEY WROTE THAT THE AIRPLANE WAS NOT TRAVELING 'VERY FAST AND IT WS PRETTY LEVEL TO THE GROUND.' THE WITNESSES COULD NOT HEAR THE ENGINES BECAUSE THEY WERE IN A CAR. ACCORDING TO FUEL RECORDS, THE PILOT OF N1576T PUT 112 GALLONS OF FUEL ON BOARD THE AIRPLANE ON MARCH 17, 1994, AND THE FLIGHT STARTED AT 1030 ON MARCH 19, 1994. THE ACCIDENT OCCURRED AT 1355, FOR A TOTAL FLIGHT TIME OF 3 HOURS AND 25 MINUTES. USING FUEL CONSUMPTION DATA FOR THIS AIRCRAFT IT WAS ESTIMATED THAT FUEL EXHAUSTION WOULD OCCUR AFTER 3 HOURS AND 4 MINUTES OF FLIGHT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate inflight decision and planning, which resulted in fuel exhaustion and the total loss of engine power.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. ALL ENGINES
2. (C) FLUID,FUEL - EXHAUSTION
3. (C) IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - EMERGENCY

Findings

4. TERRAIN CONDITION - OPEN FIELD

Factual Information

History of Flight

On March 19, 1994, about 1355 eastern standard time, a Cessna 414, N1576T, piloted by Mr. E. James Hogan, collided with the terrain while on final approach to Defiance Airport, Defiance, Ohio. The pilot was fatally injured, and the airplane was destroyed. Visual meteorological conditions prevailed at the time, and no flight plan had been filed. The flight was being conducted under 14 CFR 91.

The airplane had departed Lancaster, Pennsylvania, about 1030, enroute to Defiance, Ohio, a distance of approximately 420 statute miles, in order for the pilot to sell the airplane.

A friend of Mr. Hogan flew another airplane, and departed at the same time, for the purpose of flying Mr. Hogan back to Pennsylvania, after he briefed the new owner. The pilot of the other airplane, Mr. Ernest Buyok, said that he was in radio contact with Mr. Hogan, and that Mr. Hogan did not give him any indications of any problems. Mr. Buyok was not aware that N1576T had crashed until after he arrived at Defiance, and was told of the accident.

According to Mr. Buyok, on the day of the flight he did a pre-flight on the airplane he was to fly, and Mr. Hogan did a pre-flight on his own airplane. Mr. Buyok did not see Mr. Hogan's airplane fueled for the flight, but according to Mr. Buyok, Mr. Hogan told him he had fuel for the flight. Mr. Buyok said they taxied out and departed about 1030. Hogan's airplane was faster and N1576T got about one hour ahead of the airplane Buyok was flying. According to Lancaster Flight Center, N1576T was filled with 112 gallons of fuel on March 17, 1994.

Just prior to the accident the airplane was seen on final approach to runway 30. Witnesses observed the airplane flying in an erratic manner at a low altitude, and impact the ground.

Two children riding in their fathers car wrote:

...[we saw the airplane] going up and down toward the ground. We could hear a faint clicking noise, and the propellers were going around slowly. No landing gear were sighted...we could not hear the engine running when it crashed, but we were in the car...the plane took a short nosedive and crashed. It wasn't going very fast and it was pretty level to the ground....

The accident occurred during the hours of daylight at approximately 41 degrees, 20 minutes north, and 84 degrees, 25 minutes west.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on Mr. E. James Hogan, on March 21, 1994, at the Medical Examiner's Office, in Toledo, Ohio, by Dr. Diane Scala-Barnett.

Toxicological tests were conducted at the Federal Aviation Administration's (FAA), Toxicology and Accident Research Laboratory, Oklahoma City, Oklahoma and revealed, the drug "salicylate detected in Urine."

The toxicological tests conducted at the Lucas County Coroner's Office, Toledo, Ohio revealed, "... no drugs or alcohol where found."

WRECKAGE AND IMPACT INFORMATION

The wreckage was examined at the accident site on March 20-21, 1994. The airplane impacted in southwest corner of an open field, approximately 2 miles east of runway 30. There were no ground scars observed. The nose of the airplane was heading 030 degrees.

The airframe was intact, the right wing, and the right side of the fuselage next to the co-pilot position displayed fire damage.

Control continuity was established to all flight controls.

All seats were attached to the seat rails except the pilot's seat. The seat and the track were intact, but the seat was off their track. The pilot's seat belt stitching failed at the left attach fitting on the floor. According to rescue personnel the pilot was not wearing his shoulder harness when they arrived to remove him from the airplane. The glare shield was pushed down and forward.

Only a slight amount of fuel was observed at the crash site. The left main fuel tank showed approximately one cup. The left auxiliary fuel tank had approximately 1 inch of fuel in the tank. Both the right main and right auxiliary fuel tanks were breached. The left and right fuel selectors were found selected for the main fuel tanks. Both fuel boost pumps were in the off position.

Both engines were torn down at the Defiance Airport, and no discrepancies were found.

Both propellers were intact, all the blades were attached to their respective hubs. The left propeller displayed one blade with a twist toward the direction of rotation, one blade bent aft approximately 40 degrees, and the third blade was not damaged. The right propeller displayed one blade twisted in the direction of rotation, and bent aft approximately 30 degrees. One blade was bent aft approximately 50 degrees, and the third blade was bent aft at the tip.

Personnel Information

Mr. Hogan was in possession of a private pilot's license at the time of the accident, and his personal flight records were not located. At the time of his last FAA, third class flight physical, on November 13, 1991, the pilot reported approximately 2,000 hours of total flight time.

According to FAA records Mr. Hogan did not have a flight medical since November, 1991. Information provided the NTSB by the Lucas County Medical Examiner, revealed that since Mr. Hogan's last medical he had several heart attacks, and by-pass surgery.

ADDITIONAL INFORMATION

It was assumed that N1576T had 112 gallons of fuel on board when the flight started at 1030. The accident occurred at 1355 for a total flight time of 3 hours and 35 minutes. Based on an approximate cruise altitude of 10,000 feet at a power setting of 72.5% (lean for this airplane), a fuel flow of 197 pound per hour was determined. This airplane according to Cessna has 100 gallons of usable fuel in the main tanks (tips) and 6 gallons each in the auxiliary tanks for a total of 672 pounds of fuel. Based on the following estimates;

Time	Fuel used	Fuel Remain	Start-taxi-take off	0	30lbs	642lbs
Cruise climb to 10000'	10.4 min	70lbs	572lbs	Time to fuel exhaustion	2hr 54min	
572lbs	0					

It was estimated that the airplane would have ran out fuel at 3 hours 4.4 minutes.

The wreckage was released to the owner's representative and owner of the recovery company, Mr. Henry Dobbelaere, Charloe Aircraft, Oakwood, Ohio, on March 21, 1994.

Pilot Information

Certificate:	Private	Age:	71, Male
Airplane Rating(s):	Single-engine land; Multi-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 Invalid Medical for flight	Last FAA Medical Exam:	November 13, 1991
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	2000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N1576T
Model/Series:	414 414	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	4140356
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	April 13, 1993 100 hour	Certified Max Gross Wt.:	6350 lbs
Time Since Last Inspection:	10 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	2094 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	TSIO-520J
Registered Owner:	E. JAMES HOGAN	Rated Power:	310 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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	6°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LANCASTER , PA (LNC)	Type of Flight Plan Filed:	None
Destination:	(DFE)	Type of Clearance:	None
Departure Time:	10:30 Local	Type of Airspace:	

Airport Information

Airport:	DEFIANCE MEMORIAL DFE	Runway Surface Type:	Asphalt
Airport Elevation:	707 ft msl	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	None
Runway Length/Width:	4200 ft / 72 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	41.280979,-84.359817(est)

Administrative Information

Investigator In Charge (IIC):	Yurman, Alan
Additional Participating Persons:	JIM YARBROUGH; COLUMBUS, OH CLAUDE UNDERWOOD; WICHITA, KS JOHN KENT; SEAGOVILLE, TX
Original Publish Date:	December 7, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=38670

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