



Aviation Investigation Final Report

Location:	SANGER, Texas	Accident Number:	FTW95FA158
Date & Time:	April 9, 1995, 18:00 Local	Registration:	N5181E
Aircraft:	CESSNA 180B	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

ONE WITNESS OBSERVED THE AIRPLANE CLIMB TO 200 TO 300 FEET AGL, ENTER A STEEP RIGHT TURN, COME OUT OF THE TURN 'UPSIDE DOWN', AND THEN 'NOSE STRAIGHT DOWN AND PLOW INTO THE GROUND.' ANOTHER WITNESS STATED THE AIRPLANE 'CAME OUT OF A ROLL-OVER AND PLUNGED STRAIGHT TO THE GROUND.' THE AIRPLANE'S FINAL TURN WAS FROM A SOUTHERLY, OR UPWIND, HEADING TO A NORTHERLY, OR DOWNWIND, HEADING. WITNESSES REPORTED 'STRONG AND GUSTING' WINDS OF '35 TO 45 MPH' OUT OF THE SOUTH. IMPACT WAS NEAR VERTICAL AND ALL MAJOR COMPONENTS OF THE AIRPLANE WERE FOUND WITHIN 40 FEET OF THE INITIAL GROUND SCAR. EXAMINATION OF THE AIRPLANE AND ENGINE DID NOT DISCLOSE ANY STRUCTURAL OR MECHANICAL ANOMALIES.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S PERFORMANCE OF A LOW ALTITUDE MANEUVER AND HIS FAILURE TO MAINTAIN AIRCRAFT CONTROL. A FACTOR WAS THE GUSTY WIND.

Findings

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

Findings

1. (F) WEATHER CONDITION - GUSTS
2. (C) LOW ALTITUDE FLIGHT/MANEUVER - PERFORMED - PILOT IN COMMAND
3. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

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

Factual Information

HISTORY OF FLIGHT

On April 9, 1995, at approximately 1800 central daylight time, a Cessna 180B, N5181E, was destroyed when it impacted terrain while maneuvering near Sanger, Texas. The airline transport rated pilot was fatally injured. The airplane, part-owned and operated by the pilot, departed from a local airstrip, Bar VK Air Ranch Estates, at approximately 1755 for the personal cross country flight to Northwest Regional Airport in Roanoke, Texas. No flight plan was filed or weather briefing received for the Title 14 CFR Part 91 flight. Visual meteorological conditions prevailed throughout the area at the time of the accident.

Witnesses observed the airplane in straight and level flight, heading south along a valley, at a "low" altitude. One witness reported that as the airplane approached the head of the valley, it climbed to 200 to 300 feet above ground level, and then entered a steep right turn. He further reported that when the airplane had completed 180 degrees of turn, "it was now flying upside down", and then "all of a sudden it turned nose straight down and plowed into the ground." Another witness observed the airplane "doing roll-overs" and stated that the airplane "came out of a roll-over and plunged straight down to the ground." Two additional witnesses who observed portions of the event had consistent recollections.

One of the witnesses stated that "the winds were strong and gusting, blowing from the south to the north." Another witness reported that the "wind speed at the time of the crash was approximately 35 to 45 mph out of the south." He also remarked that the airplane "would have felt the full force of the wind on the belly" as it completed 90 degrees of turn.

PERSONNEL INFORMATION

The pilot was employed by a major airline. Federal Aviation Administration (FAA) records indicated he had 5,500 hours total flight time as of October 14, 1994. According to the pilot's non-work flight logbook, he had accumulated a total of 81 hours in the airplane since he and a partner purchased it in the spring of 1994.

AIRCRAFT INFORMATION

A review of the airframe and engine logbooks did not reveal any anomalies or uncorrected maintenance defects.

WRECKAGE AND IMPACT INFORMATION

All major components of the airplane were located within approximately 40 feet of the initial

ground scar. The scar consisted of a central crater surrounded by a pattern of heavy indentations corresponding to the landing gear, lift struts, and wing leading edges. Foliage was cleanly sliced at an angle of approximately 80 degrees from the side of a tree overhanging the ground scar.

The fuselage came to rest inverted adjacent to the ground scar on a measured heading of 310 degrees magnetic. The tail cone and empennage section remained attached to the cabin section only by control cables. During rescue efforts, the cables were cut by local authorities and the cabin section was rotated into the ground scar. Both wings separated from the fuselage and were crushed aft across the entire span. The wing skins were bulged outward and torn open at the fuel bladder locations. Due to the extent of the impact damage, control continuity could not be established.

The engine was buried in muddy ground up to the level of the accessory case in the central crater. The propeller remained attached to the crankshaft and one blade separated from the propeller hub. Both blades displayed chordwise scratches and leading edge gouging. The blade that remained attached to the hub evidenced torsional twisting. Examination of the engine disclosed no evidence of pre-impact mechanical failure.

MEDICAL AND PATHOLOGICAL INFORMATION

The autopsy was performed by Marc A. Krouse, M.D., of the Office of Chief Medical Examiner of Tarrant County in Fort Worth, Texas. According to Dr. Canfield of the FAA's Civil Aeromedical Institute, the toxicological finding of ethanol (alcohol) in the liver "is most likely from postmortem ethanol production."

ADDITIONAL DATA

The wreckage was released to the co-owner.

Pilot Information

Certificate:	Airline transport; Commercial; Flight engineer	Age:	48, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 14, 1994
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	5500 hours (Total, all aircraft), 81 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N5181E
Model/Series:	180B 180B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	50481
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	October 3, 1994 Annual	Certified Max Gross Wt.:	2650 lbs
Time Since Last Inspection:	37 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5280 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Installed	Engine Model/Series:	O-470-K
Registered Owner:	RICE, ROBERT G.	Rated Power:	230 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:	DFW ,603 ft msl	Distance from Accident Site:	30 Nautical Miles
Observation Time:	17:50 Local	Direction from Accident Site:	160°
Lowest Cloud Condition:	25000 ft AGL	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	18 knots / 25 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	28°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(TX32)	Type of Flight Plan Filed:	None
Destination:	ROANOKE , TX (52F)	Type of Clearance:	None
Departure Time:	17:55 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	33.360652,-97.169868(est)

Administrative Information

Investigator In Charge (IIC):	Snyder, Georgia
Additional Participating Persons:	EDWARD L HINCH; FT. WORTH , TX
Original Publish Date:	October 13, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=19220

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