Aviation Investigation Final Report

Location:	Hobbs, New Mexico	**Accident Number:**	FTW03FA024
Date & Time:	October 30, 2002, 07:33 Local	**Registration:**	N3998Y
Aircraft:	Piper PA-31T	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot of the twin turbo-prop airplane lost control of the aircraft during the initial takeoff climb phase while in instrument meteorological conditions. An instrument flight rules flight plan was filed for the planned 169-nautical mile cross-country flight. The aircraft impacted terrain approximately 1.7 miles northwest of the departure airport. The 2,893-hour instrument rated private pilot, who had accumulated over 765 flight hours in the same make and model, had been cleared to his destination "as filed," and told to maintain 7,000 feet, and to expect 17,000 feet in 10 minutes. After becoming airborne, the flight was cleared for a left turn. The tower controller then cleared the flight to contact air route traffic control center. The pilot did not acknowledge the frequency change; however, he did establish radio contact with center on 133.1, and reported "climbing through 4,900 feet for assigned 7,000." The weather reported at the time of flight was winds from 010 degrees at 15 knots with 700 feet overcast and 3 miles visibility in mist. The radar controller observed the aircraft climbing through 5,500 feet and subsequently observed the airplane starting a descent. No distress calls were received from the flight. Signatures at the initial point of impact were consistent with a nose-low ground impact in a slight right bank. A post-impact fire consumed the airplane. No discrepancies or anomalies were found at the accident site that could have prevented normal operation of the airplane.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's loss of control while in instrument meteorological conditions during initial takeoff climb. Contributing factors were the prevailing clouds and fog.

Findings

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

Findings
1. (F) WEATHER CONDITION - CLOUDS
2. (F) WEATHER CONDITION - FOG
3. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

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

Findings
4. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On October 30, 2002, at 0733 mountain standard time, a Piper PA-31T twin turbo-prop airplane, N3998Y, was destroyed upon impact with terrain following a loss of control during initial takeoff climb from the Lea County Regional Airport (HOB), near Hobbs, New Mexico. The instrument rated private pilot, sole occupant of the airplane, was fatally injured. The airplane was owned and operated by the pilot. Instrument meteorological conditions prevailed for the 14 Code of Federal Regulations Part 91 flight for which an instrument flight rules (IFR) flight plan was filed for the 169-nautical mile flight. The flight was originating at the time of the accident. The El Paso International Airport, (ELP), near El Paso, Texas, was the flight's intended destination.

According to the air traffic control (ATC) provided to the investigator in charge, the pilot had been cleared to ELP "as filed," and to maintain 7,000 feet, and told to expect 17,000 feet 10 minutes after departure. The flight had been assigned a transponder code of 2262. The airplane was cleared for takeoff from runway 03 at HOB at 0739 local. After becoming airborne, the flight was cleared for a left turn. The tower then cleared N3998Y to contact center. The pilot did not acknowledge the frequency change; however, he did establish radio contact with Fort Worth Center on 133.1, and reported climbing through 4,900 feet for an assigned 7,000-foot. Fort Worth Center reported the aircraft in radar contact and cleared the flight to 9,000 feet. The pilot acknowledged receipt of the clearance to his new assigned altitude of 9,000 feet. No further communications were received from N3998Y.

The controller observed the aircraft on radar climbing through 5,500 feet and subsequently observed the airplane starting a descent. Several unsuccessful attempts were made by the controller to contact N3998Y. Fort Worth Center notified Hobbs tower of the situation. At 0734:15, the tower operator at Hobbs Airport advised Fort Worth Center that an airplane had crashed 3 miles north of the HOB airport

No distress calls or microphone clicking were received from N3998Y. There were no reported eyewitnesses to the accident; however, an employee of a sign company located along the highway reported hearing the sound of the airplane impacting the ground.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with a single and multi-engine instrument rating. His last third-class medical certificate was issued on June 17, 2002. He had a limitation for wearing corrective lenses.

On an Pilot/Operator Aircraft Accident Report, (NTSB Form 6120.1/2), which was completed by the pilot on February 11, 2002, as a result of another accident, the pilot reported the following flight time: 2,893 flight hours total time, 765 hours in the same make and model, 1,851 hours in airplanes single engine land, 1,046 hours in multi engine airplanes, 68.3 hours of night time, 140.9 hours of actual weather time, and 75.3 hours of simulated instrument time. The pilot's logbooks were not located during the course of the investigation.

The pilot completed his last biennial flight review (BFR) on July 18, 2001, in a similar PA-31T aircraft.

AIRCRAFT INFORMATION

The 1980 model Cheyenne II airplane, serial number 31T-8020055, was purchased from Prestige Aero Ltd, in Orlando, Florida. The aircraft was registered to its current owner on March 4, 2002. The last major inspection was completed on May 14, 2002, at 3,956.1 hours total time on the airframe. The last entry on the aircraft logbook was made on July 12, 2002, when the avionics were upgraded. At that time, the aircraft had accumulated a total of 3,965.6 hours

The 9,000 pound gross weight, (9,050 ramp weight), airplane was powered by two P&W of Canada PT6A-28 engines, each producing 620-shaft horsepower. The right engine, serial number PCE-52201 was last overhaul in December 1997 at 3,499 hours and 3,709 cycles. The left engine, serial number PCE-52210, was also overhauled during December 1997 at the P&W facility in West Virginia. The engines were driving 4-bladed McCauley propellers, model 4HFR34C766-C/94LNA-2. The right propeller was serial number 960988, and the left propeller was serial number 960987.

The aircraft was being maintained in accordance with the Piper Progressive Inspection Program. There is no report regarding open maintenance discrepancies. No weight and balance data was found with the aircraft maintenance records. A detailed review of the maintenance records for the airframe and the engines did not reveal any discrepancies or overdue inspections that could have contributed to the accident. A review of the re-fueling records for the airplane revealed that the aircraft was last topped off with 120 gallons of Jet A fuel by Flower Aviation at the HOB airport on October 21, 2002.

METEOROLOGICAL INFORMATION

A special weather observation was taken by HOB tower personnel at 1446 UTC, (0746 local), approximately 13 minutes after the accident. The weather at 0746 was reported as 700 overcast, visibility 3 miles in mist, and winds from 010 degrees at 15 knots. The temperature was 06 degrees centigrade, the dew point was 05 degrees centigrade, with an altimeter setting of 30.14 inches of Mercury. The tops of the overcast was not known.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted in a level pasture approximately 1.7 nautical miles north west (336 degree bearing) from the HOB airport. The energy path of the wreckage was observed and measured on a magnetic heading of 305 degrees. The wreckage of the airplane came to rest on a heading of 035 degrees. The GPS location of the accident site was 32: 42.935 North and 103: 13.585 West.

The initial point of impact was a shallow crater containing pieces of green glass, the aileron counterweight from the right aileron, and a strobe light assembly. The fragments of green glass were identified as portions of the navigation light for the right wing.

Both engines were found separated from their respective nacelles; thus, it was not possible to establish the continuity of the engine controls. The damage to the right engine was more severe that that of the left engine. The front gear box for the right engine was found separated from the right engine, coming to rest approximately 80 feet ahead of the resting place of the right engine. The right engine sustained severe fire damage, while the left engine sustained only minor fire damage. The data plates were not located on either engine. The compressors for both engines were examined at the accident site. Visual examination revealed that the compressor blades on both engines exhibited curling and rotational damage.

The left propeller assembly was found separated from the engine. The hub was destroyed and all four blades were separated from the hub. The blades exhibited chordwise scratching and leading edge gouging. The blades also exhibited "S" bending and torsional twisting.

The right propeller was also found separated from the engine. The hub was destroyed and all four blades were separated. Three of the blades were located near the crater at the initial point of impact. The fourth blade found 120 feet beyond the main wreckage. All four blades exhibited severe impact damage and three of the blades were broken about the midspan point. The fourth blade had extensive leading edge damage. All blades exhibited "S" bending and torsional twisting.

The nose baggage compartment door, located on the left side of the nose of the airplane separated from the aircraft during the accident sequence. The door locking latches were found in the locked position. The left lower corner of the baggage compartment was crushed at about a 45-degree angle. A propeller slash was found cutting through the wrinkles of the crushed area. The baggage door is located forward of the propeller arc for the left engine.

The imprint of the bottom of the right wing was found adjacent to the initial impact crater. Approximately 18 feet from the initial impact was a larger crater, measuring 3 feet wide by six feet in length, and approximately 12 to 18 inches in depth. Portions of fiberglass panels corresponding to the underside of the right engine cowling and nacelle were found within this crater.

Both wing tip tanks were found separated from their respective wing. Both wing tip tanks

feature crushing damage to the forward portion of the tank. The front end of each of the tip tank assemblies were found crushed in the aft direction at an estimated angle of 45 to 60 degrees.

Despite being severely burned, the tail section of the airplane was the only easily recognizable part of the airplane that retained its appearance. The rudder remained attached to the vertical stabilizer and the left elevator remained attached to the left horizontal stabilizer. The right horizontal stabilizer and the right elevator were consumed by fire. Due to the severity of the damage, flight control continuity could only be established to the rudder and elevators.

The landing gear was found in the retracted position. The position of the wing flaps could not be determined. The flap motor and the actuators could not be located. The cockpit landing gear and flap selectors were destroyed by fire and could not be identified.

The instrument panel was consumed by fire. A portion of the cockpit roof including the center divider for the windshield was found in one piece. The magnetic compass was found partly attached to this part. An un-mounted heading indicator was located at the accident site displaying a heading of 194 degrees. The badly distorted windshield glare-shield was located at the accident site. The annunciator panels were not located. The console and all of the engine control levers were destroyed by fire. Both grips from the pilot's control yoke were found fractured. The rudder trim was found in the neutral position. The elevator trim was found in the "slight nose up" position. The trim tab actuator for the right aileron could not be located. The trim wheels and trim position indicators in the cockpit were destroyed.

A fuel-fed fire initiated after initial impact. The prevailing winds from the north spread the grass fire to cover approximately one acre of pasture. There was no damage to any ground structures, fences or trees.

No evidence of a bird strike was found at the wreckage.

SURVIVAL ASPECTS

The airplane was equipped with seat belts and shoulder harnesses for both seats in the cockpit. The pilot was wearing the seat belt and shoulder harness.

The airplane was equipped with an ELT. No signals were received from the ELT. The ELT could not be located and was suspected destroyed by the post-impact fire.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot on October 31, 2002, at the Office of the Medical Investigator, State of New Mexico. The cause of death was listed as multiple injuries. Forensic toxicology of the specimens from the pilot was also performed at the same location. Toxicology revealed no ethanol nor drugs were detected, but evidence of Rofecoxib (vioxx)

was present.

ADDITIONAL INFORMATION

The airplane was not insured. The estate of the pilot contracted with ASOD of Lancaster, Texas, to move the wreckage from the accident site to the owner's hangar at HOB airport. The wreckage was released to the estate of the pilot at the accident site.

Pilot Information

Certificate:	Private	**Age:**	56,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 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	June 17, 2002
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	July 18, 2001
Flight Time:	2893 hours (Total, all aircraft), 765 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N3998Y
Model/Series:	PA-31T	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	31T-8120018
Landing Gear Type:	Retractable - Tricycle	**Seats:**	7
Date/Type of Last Inspection:	May 15, 2001 100 hour	**Certified Max Gross Wt.:**	9050 lbs
Time Since Last Inspection:	100 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	4900 Hrs as of last inspection	**Engine Manufacturer:**	Pratt & Whitney
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	PT6A-28
Registered Owner:	ROBERT D. CALHOON	**Rated Power:**	620 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	HOB,3661 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	07:46 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:		**Visibility**	3 miles
Lowest Ceiling:	Overcast / 700 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	15 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	10°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.13 inches Hg	**Temperature/Dew Point:**	6°C / 5°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	HOBBS, NM (HOB)	**Type of Flight Plan Filed:**	IFR
Destination:	EL PASO, TX (ELP)	**Type of Clearance:**	IFR
Departure Time:	07:29 Local	**Type of Airspace:**	Class E

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:**	32.702777,-103.23278

Administrative Information

Investigator In Charge (IIC):	Casanova, Hector
Additional Participating Persons:	Juan Rivera; Federal Aviation Administration,Lubbock FSDO,SW 13; Lubbock, TX Charles Little; Piper Aircraft; Chino Hills, CA Tracy Gandy; P&W Canada ; Phoenix, AR
Original Publish Date:	July 29, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=55968