Aviation Investigation Final Report

Location:	Prattsville, Arkansas	**Accident Number:**	FTW03FA111
Date & Time:	March 15, 2003, 07:59 Local	**Registration:**	N91594
Aircraft:	Piper PA-38-112	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The single-engine airplane impacted a radio tower guy-wire and terrain while on a VFR cross-country flight. The 75-hour non-instrument rated private pilot had purchased the airplane 3 days prior to the accident. Witnesses reported that they could not see the airplane due to the fog, but heard it as it maneuvered overhead. The person, who leases the field that the airplane impacted, reported that at the time of the accident, he could not see the 500-foot radio tower's lower strobe light, which is about 150 to 250 feet above the ground. At 0653, the nearest weather observation facility reported winds from 360 at 6 knots, an indefinite ceiling at 100 feet, visibility 1/4 statute mile in fog, temperature 43 degrees Fahrenheit, dew point 43 degrees Fahrenheit, and an altimeter setting of 30.02 inches of Mercury.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's execution of VFR flight into IMC and his failure to maintain obstacle clearance. Fog conditions and the pilot's lack of an instrument rating are contributing factors.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: CRUISE

Findings
1. (F) WEATHER CONDITION - FOG

2. (F) VFR FLIGHT INTO IMC - INADVERTENT - PILOT IN COMMAND
3. (F) LACK OF EXPERIENCE - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MANEUVERING

Findings
4. (F) OBJECT - ELECTRICAL TOWER
5. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings
6. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On March 15, 2003, at 0759 central standard time, a Piper PA-38-112 single-engine airplane, N91594, was destroyed when it impacted a radio tower guy-wire and terrain while maneuvering near Prattsville, Arkansas. The airplane was owned and operated by the pilot. The non-instrument rated private pilot and passenger were fatally injured. Instrument meteorological conditions prevailed, and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The cross-country flight originated from Decatur, Texas, at 0500. The flight was destined for Marion, South Carolina, with planned fuel stops at Sheridan, Arkansas; Hartselle, Alabama; and Union, South Carolina.

Witnesses near the accident site reported that they could not see the airplane due to the fog, but heard it as it maneuvered overhead. As the airplane was maneuvering, the witnesses heard a "strange noise," which one witness described as a "click-twang." They then heard a loud bang or "thud/thump", at which time the "engine stopped." The person, who leases the field where the airplane impacted, reported that at the time of the accident, he could not see the 500-foot radio tower's lower strobe light, which is about 150 to 250 feet above the ground.

PERSONNEL INFORMATION

The 75-hour pilot held a private pilot certificate with an airplane single-engine land rating, and an airframe and power plant certificate. The pilot's most recent third-class medical certificate was issued on May 10, 2002, with no waivers or limitations.

AIRCRAFT INFORMATION

The 1981-model Piper PA-38-112, serial number 38-82A0083, was a single-engine, low wing monoplane. The airplane was a side-by-side, two seat, dual control airplane, powered by a Lycoming O-235-L2C 4-cylinder, air-cooled, 118 horsepower engine. At the time of the accident, the airplane had accumulated approximately 3,720.98 hours of flight time. The airplane was certificated in the normal/standard category, and was registered to the accident pilot on March 12, 2003.

METEOROLOGICAL INFORMATION

At 0753, the weather observation facility located at the Grider Field Airport (PBF), Pine Bluff, Arkansas, located 29 nautical miles east-southeast of the accident site, reported winds from 360 at 6 knots, an indefinite ceiling at 100 feet, visibility 1/4 statute mile in fog, temperature 45 degrees Fahrenheit, dew point 45 degrees Fahrenheit, and an altimeter setting of 30.03 inches

of Mercury.

At 0653, the weather observation facility located at PBF reported winds from 360 at 6 knots, an indefinite ceiling at 100 feet, visibility 1/4 statute mile in fog, temperature 43 degrees Fahrenheit, dew point 43 degrees Fahrenheit, and an altimeter setting of 30.02 inches of Mercury.

At 0753, the weather observation facility located at the Memorial Field Airport (HOT), Hot Springs, Arkansas, located 32 nautical miles west-northwest of the accident site, reported calm winds, overcast ceiling at 100 feet, visibility 1/2 statute mile in fog, temperature 45 degrees Fahrenheit, dew point 45 degrees Fahrenheit, and an altimeter setting of 30.02 inches of Mercury.

At 0653, the weather observation facility located at HOT reported calm winds, overcast ceiling at 100 feet, visibility 1/2 statute mile in fog, temperature 45 degrees Fahrenheit, dew point 45 degrees Fahrenheit, and an altimeter setting of 30.00 inches of Mercury.

WRECKAGE AND IMPACT INFORMATION

The main wreckage was located in a field approximately 3 miles south of Prattsville, Arkansas. The Global Positioning System (GPS) coordinates recorded at the accident site using a hand held GPS unit places the radio tower at 34 degrees 17 minutes 49.3 seconds north latitude and 92 degrees 29 minutes 49.3 seconds west longitude. The aircraft came to rest at 34 degrees 17 minutes 44.2 seconds north latitude and 92 degrees 29 minutes 47.1 seconds west longitude. The radio tower stood 801 feet above mean sea level (msl). The aircraft impacted the terrain 543 feet from the tower, bearing 171 degrees. The aircraft came to rest upright on a magnetic heading of 158 degrees.

Examination of the aircraft at the accident site revealed that the bottom of the right wing showed compression. The outboard section of the right wing leading edge was twisted upward. The inboard section of the right wing leading edge was crushed upward and slightly aft.

The firewall was displaced downward approximately 20 degrees and pushed aft at the bottom.

The left wing showed evidence of guy wire contact along the spar. The left wing leading edge was cut off from 63 inches from fuselage to tip. The first wire mark starts approximately 58 inches from fuselage. The leading edge of the left wing is cut from the bottom of the spar to aft of the top of the spar. The inboard section of the left wing's leading edge is crushed upward. The outboard section of the left wing was curled upward.

The right main landing wheel was separated from the aircraft. The left wheel and strut were also separated from the aircraft. The nose wheel was folded aft.

The left side of the empennage was twisted downward and folded left forward. The tail was partially separated aft of the cabin. The outboard section of the right horizontal stabilizer was displaced downward. The outboard section of the left horizontal stabilizer was displaced downward.

The fuel tanks in both wings were found breeched, with approximately 5 gallons of fuel remaining in each tank. Fuel was also found in the gascolator/strainer, carburetor, and the engine-driven pump.

Both entry doors were found separated from the fuselage. Flight control continuity was established throughout the aircraft.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by the Medical Examiner Division of the Arkansas State Crime Laboratory on March 17, 2003. According to the report, "The cause of death...[was] multiple fractures and internal injuries sustained from the aircraft accident." Toxicological tests performed by the Federal Aviation Administration's Civil Aeromedical Institute (CAMI) were negative for carbon monoxide, cyanide, ethanol, and illegal drugs.

ADDITIONAL INFORMATION

The wreckage was released to the owner's representative on March 16, 2003.

Pilot Information

Certificate:	Private	**Age:**	32,Male
Airplane Rating(s):	Single-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 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	May 10, 2002
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	75 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N91594
Model/Series:	PA-38-112	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	38-82A0083
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	September 9, 2002 Annual	**Certified Max Gross Wt.:**	1670 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	3685.47 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-235-L2C
Registered Owner:	Lewis A. Herring Jr.	**Rated Power:**	118 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Dawn
Observation Facility, Elevation:	PBF,204 ft msl	**Distance from Accident Site:**	29 Nautical Miles
Observation Time:	07:53 Local	**Direction from Accident Site:**	112°
Lowest Cloud Condition:	Thin Overcast	**Visibility**	0.25 miles
Lowest Ceiling:	Indefinite (V V) / 100 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.03 inches Hg	**Temperature/Dew Point:**	7°C / 7°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	Decatur, TX (58TA)	**Type of Flight Plan Filed:**	None
Destination:	Sheridan, AR (9M8)	**Type of Clearance:**	Unknown
Departure Time:	05:00 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	34.295555,-92.496391

Administrative Information

Investigator In Charge (IIC):	Wigington, Douglas
Additional Participating Persons:	Harry L Kifer; FAA Flight Standards District Office; Little Rock, 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=56634