



Aviation Investigation Final Report

Location:	SAVOY, Illinois	Accident Number:	CHI97FA133
Date & Time:	May 17, 1997, 20:32 Local	Registration:	N383AV
Aircraft:	Piper PA-38-112	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane was on the initial climb after a touch and go landing. The engine lost power followed by a departure from controlled flight and a collision with the terrain. Subsequent examination of the airplane revealed only unusable fuel remaining in both fuel tanks. The operator of the airplane indicated that at the time of departure the airplane contained a maximum of 20 gallons of aviation fuel. According to the Hobbs meter the airplane was operated for 2.8 hours. The operator said that their experience with this airplane in all flight conditions fuel consumption averaged 6.5 gallons/hour.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper preflight planning/preparation and her not maintaining airspeed. Factors were fuel exhaustion and entering an inadvertent stall.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) FLUID,FUEL - EXHAUSTION
2. (C) PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

- 3. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
- 4. (F) STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On May 17, 1997, at 2032 central daylight time, a Piper PA-38-112, N383AV, registered to Flightstar Corporation and operated by a private pilot, was destroyed on impact with the terrain following a departure from controlled flight. The airplane had landed on runway 32L (8,100' X 150' dry/concrete), and was conducting a touch and go landing when the engine suffered a loss of power during initial climb following takeoff. The pilot sustained fatal injuries. The personal 14 CFR Part 91 flight was operating in visual meteorological conditions. No flight plan was on file. The local flight departed Savoy at 1749.

The pilot told personnel at Flightstar Corporation the flight was for the purpose of maintaining currency and proficiency. However, the actual whereabouts of the airplane between the departure at 1749, until the return to the airport is not known. No one was located who indicated that they witnessed the preflight of the airplane. Personnel at Flightstar Corporation said that the pilot did not request fuel for the airplane prior to the flight.

PERSONNEL INFORMATION

The pilot born September 14, 1974, was the holder of a private pilot certificate issued January 5, 1995. She received a third class medical certificate on September 5, 1996. At the time of the accident she had accumulated a total pilot time of 180 hours, with 63 hours in this make and model of airplane. Her most recent biennial flight review was on February 14, 1997.

AIRCRAFT INFORMATION

The airplane was a Piper PA-38-112, N383AV, and serial number 38-79A0124. At the time of the accident the airframe had accumulated about 7,462 hours, with 72 hours since the most recent annual inspection on March 19, 1997.

COMMUNICATIONS

A transcript of conversations between the pilot of N383AV and the Federal Aviation Administration, University of Illinois, Air Traffic Control Tower, is attached as an addendum to this report.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted the terrain on the airport, to the northwest of the intersection of runways 32L and 36, in a grassy area. The entire airplane was identified at the impact site.

The front of the airplane including the nose landing gear, engine, propeller, cowling, firewall, and instrument panel bent up and aft into the cockpit. The airplane remained standing on the collapsed engine and the main landing gear. The tailcone broke and bent forward over the cockpit. Both right and left wings were collapsed from the leading edge aft with spanwise creasing.

Continuity was established throughout all flight and engine controls. The engine was examined and had thumb compression on all cylinders. The magnetos were broken away from their mounts, but both sparked on all leads. The carburetor was also broken from its mount. The venturi was intact. The engine was rotated and continuity was established through the power section including the rear accessories and valve train. During rotation oil was observed pumping out of the oil filter mount at the rear case.

The propeller had no polishing or gouging on the leading edge. One blade was bent aft about 20 degrees and the other about 5 degrees.

Both the left and right fuel tanks remained intact; however, only contained unusable fuel. The fuel selector was in the right tank position. There was no fuel leakage around the accident site or running from the airplane after the accident. The fuel caps were in place and the seals were in good condition. On inspection, there were no fuel stains identified anywhere on the airframe.

Personnel at Flightstar Corporation said that the airplane was serviced with eight (8) gallons of aviation fuel on May 17, 1997, prior to the accident flight. They said that it was not their policy to fuel their airplanes to the maximum capacity, rather to the bottom of the "filler neck." They estimated that the usable fuel aboard the airplane at the time the pilot received it at a maximum of 20 gallons (usable). An excerpt from the Piper Aircraft PA-38-112, Maintenance Manual is attached to this report and states, "... Bottom of filler neck indicator equals 10 U. S. gallons" [20 gallons total]. Records kept at Flightstar indicate an average fuel burn for the Piper PA-38-112 of 6.5 gallons/hour, based on the use of a Hobbs meter and all flight conditions of their airplanes.

At the time the pilot received the airplane, records at Flightstar indicated a Hobbs meter time of 202.8 hours. In the wreckage, the Hobbs meter read 205.6 hours.

MEDICAL AND PATHOLOGICAL INFORMATION

A post-mortem examination of the pilot indicated that death was due to trauma, with no physiological or pathological conditions found that could not be associated with the accident. Results of toxicological examination of specimens from the pilot were negative for those substances screened.

ADDITIONAL INFORMATION

Parties to the accident were the Federal Aviation Administration, Flight Standards District Office, Springfield, Illinois; Piper Aircraft Corporation, Vero Beach, Florida; and Lycoming Engines, Williamsport, Pennsylvania.

The wreckage was released to the owner (Flightstar Corporation) on May 18, 1997.

Pilot Information

Certificate:	Private	Age:	22,Female
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-w/ waivers/lim	Last FAA Medical Exam:	September 5, 1996
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	180 hours (Total, all aircraft), 63 hours (Total, this make and model), 100 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N383AV
Model/Series:	PA-38-112 PA-38-112	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	38-79A0124
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	March 19, 1997 Annual	Certified Max Gross Wt.:	1670 lbs
Time Since Last Inspection:	72 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	7462 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-235-L2C
Registered Owner:	FLIGHTSTAR CORP.	Rated Power:	112 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:	Dusk
Observation Facility, Elevation:	CMI ,754 ft msl	Distance from Accident Site:	
Observation Time:	20:30 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	22°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:	(CMI)	Type of Clearance:	VFR
Departure Time:	00:00 Local	Type of Airspace:	Class D

Airport Information

Airport:	UNIV. OF ILLINOIS-WILLARD CMI	Runway Surface Type:	Concrete
Airport Elevation:	754 ft msl	Runway Surface Condition:	Dry
Runway Used:	32L	IFR Approach:	None
Runway Length/Width:	8100 ft / 150 ft	VFR Approach/Landing:	Straight-in;Touch and go

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:	40.059299,-88.249176(est)

Administrative Information

Investigator In Charge (IIC):	Wilson, Stephen
Additional Participating Persons:	RUSSELL E ATKINS; SPRINGFIELD , IL ROBERT E SCOTT; SPRINGFIELD , IL MICHAEL MC CLURE; VERO BEACH , FL GREGORY ERIKSON; WILLIAMSPORT , PA
Original Publish Date:	February 29, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=10425

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).