



National Transportation Safety Board Aviation Accident Final Report

Location:	WORTH, IL	Accident Number:	CHI01LA030
Date & Time:	11/01/2000, 1600 CST	Registration:	N169DM
Aircraft:	Aviat PITTS S-2B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airplane impacted the terrain following a loss of engine power. The pilot reported that he performed a preflight of the airplane with the exception of verifying a chart used to keep track of the fuel on board. According to the pilot he thought there were 19 gallons of fuel on board, however, 15.2 gallons of the fuel were used on a previous flight. He reported, "...I misread that part of the calculation." Fuel exhaustion occurred about 20 minutes after takeoff while at an altitude of 1,050 feet above the ground. The pilot reported "Approximately 22 seconds later I impacted the ground with a 75' landing distance, measured using step method. A/C did not roll or tumble, but I was able to keep it upright through the impact. The speed of impact was approximately 110 mph as I had to avoid a bridge and set it down immediately." He reported on the form that the accident could have been prevented "By thorough ground, physical, preflight. Do not use a chart, without actual in sight ck. of fuel levels."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate preflight of the airplane and his failure to verify the fuel supply on board, which resulted in fuel exhaustion. Factors associated with the accident were the low altitude at which the power loss occurred and the lack of suitable terrain given the low altitude.

Findings

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

Findings

1. (C) FLUID,FUEL - EXHAUSTION
2. (C) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND
3. (C) FUEL SUPPLY - NOT VERIFIED - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. (F) ALTITUDE - LOW
5. (F) TERRAIN CONDITION - NONE SUITABLE

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Factual Information

On November 1, 2000, at 1600 central standard time, an Aviat Pitts S-2B, N169DM, operated by a commercial pilot collided with the terrain during a forced landing following a loss of engine power. The forced landing was made in a field near 115th and Beloit Avenue in Worth, Illinois. The pilot was not injured and the airplane was substantially damaged. The 14 CFR Part 91 personal flight was operating in visual meteorological conditions without a flight plan. The flight originated from Kankakee, Illinois, at 1540.

The pilot reported that he performed a preflight of the airplane with the exception of verifying a chart used to keep track of the fuel on board. According to the pilot he thought there were 19 gallons of fuel on board, however, 15.2 gallons of the fuel were used on a previous flight. He reported, "...I misread that part of the calculation." The pilot reported that fuel exhaustion occurred approximately 20 minutes after takeoff. He was at an altitude of 1,050 feet above the ground. He reported, "Approximately 22 seconds later I impacted the ground with a 75' landing distance, measured using step method. A/C did not roll or tumble, but I was able to keep it upright through the impact. The speed of impact was approximately 110 mph as I had to avoid a bridge and set it down immediately."

The pilot completed an NTSB Form 6120.1/2. He reported on the form that the accident could have been prevented "By thorough ground, physical, preflight. Do not use a chart, without actual in sight ck. of fuel levels."

Pilot Information

Certificate:	Commercial	Age:	63, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	05/07/1999
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	3485 hours (Total, all aircraft), 145 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aviat	Registration:	N169DM
Model/Series:	PITTS S-2B PITTS S-2B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Aerobatic	Serial Number:	5287
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	0 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	IO-540
Registered Owner:	ALFRED R. JUDD	Rated Power:	260 hp
Operator:	ALFRED R. JUDD	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MDW, 620 ft msl	Distance from Accident Site:	14 Nautical Miles
Observation Time:	1553 CST	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 3500 ft agl	Visibility	10 Miles
Lowest Ceiling:	Broken / 25000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	72° C / 48° C
Precipitation and Obscuration:			
Departure Point:	KANKAKEE, IL (IKK)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1540 CST	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): PAMELA S SULLIVAN **Report Date:** 10/23/2001

Additional Participating Persons: WILLIAM J LORCH; W. CHICAGO, IL

Publish Date:

Investigation Docket: NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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