Aviation Investigation Final Report

Location:	PEMBERTON, New Jersey	**Accident Number:**	IAD98LA063
Date & Time:	May 25, 1998, 15:00 Local	**Registration:**	N6577E
Aircraft:	Cessna 175	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he added 20 gallons of fuel, prior to his departure, which brought the total fuel onboard between 45 and 48 gallons. He purchased this fuel at a local airport and transported it to his airplane at the lake, since no fueling services were available at Lake Hinkley. The pilot estimated the flight would take him about 2 1/2 hours to complete. About 2 hours after his departure, the engine lost power, and the pilot 'landed the airplane in a corn field, out of fuel.' He stated that he had no mechanical problems with the airplane, and that the fuel gages gradually decreased during the flight; however, he 'would not rely on the fuel gages in a forty year old airplane.' Examination of the airplane revealed that both fuel tanks were intact and empty. According to a representative of the engine's manufacturer, the fuel consumption for the model engine was 8 to 10 gallons per hour. The pilot reported 250 hours of total flight experience, 10 hours of which were in the make and model of the accident airplane.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate fuel consumption calculations and his improper in-flight decision to continue flying with an inadequate fuel supply.

Findings

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

Findings
1. (C) FUEL CONSUMPTION CALCULATIONS - INADEQUATE - PILOT IN COMMAND
2. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
3. (C) FLUID,FUEL - EXHAUSTION

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

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

Factual Information

On May 25, 1998, about 1500 eastern daylight time, a Cessna 175, N6577E, was substantially damaged during a forced landing near Pemberton, New Jersey. The certificated private pilot and passenger were not injured. Visual meteorological conditions prevailed and no flight plan was filed for the flight destined for the Philadelphia Seaplane Base (9N2), Essington, Pennsylvania. The personal flight was conducted under 14 CFR Part 91.

The pilot reported that prior to his departure from Lake Hinkley, New York, at 1245, he added 20 gallons of fuel, which brought the total fuel onboard between 45 and 48 gallons. He stated that he purchased this fuel at a local airport and transported it to his airplane at the lake, since no fueling services were available at Lake Hinkley. The pilot estimated the flight would take him about 2 1/2 hours to complete. He reported that while en route, the airplane was operating at a decreased power level, requiring him to continually add power to maintain the same RPM amount and "keep it on the step." About 30 minutes from his destination, at 1500, the engine lost power, and the pilot "landed the airplane in a corn field, out of fuel." He stated that he had no mechanical problems with the airplane, and that the fuel gages gradually decreased during the flight, however he "would not rely on the fuel gages in a forty year old airplane."

A Federal Aviation Administration Inspector reported that the airplane impacted the field on its water floats, and slid to a stop in an upright position. Both fuel tanks were examined by the Inspector, and found intact and empty.

A mechanic, who inspected the airplane after the accident, reported that the magneto oil seals were broken and oil was discovered leaking into both magnetos. Spark plug wires were found "frayed" and "old" and according to the mechanic, their malfunction would have caused an increased fuel consumption by the engine.

According to a representative of the engine's manufacturer, the fuel consumption for the model engine was 8 to 10 gallons per hour. The representative also stated that the engine would not consume much more fuel than 10 gallons per hour if the magneto timing was incorrect, oil was leaking inside the magnetos, and their harnesses were in poor condition.

The pilot reported 250 hours of total flight experience, 10 hours of which were in the make and model of the accident airplane.

Pilot Information

Certificate:	Private	**Age:**	47,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	March 12, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	250 hours (Total, all aircraft), 10 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N6577E
Model/Series:	175 175	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	56077
Landing Gear Type:	Float	**Seats:**	4
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	2350 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O&VO-360 SER
Registered Owner:	JOSEPH REED WILSON	**Rated Power:**	180 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:	WRI ,133 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	15:05 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Unknown	**Visibility**	5 miles
Lowest Ceiling:	Broken / 2000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	21°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LAKE HINKLEY , NY (NONE)	**Type of Flight Plan Filed:**	None
Destination:	ESSINGTON , PA (9N2)	**Type of Clearance:**	None
Departure Time:	14:00 Local	**Type of Airspace:**	

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	Vegetation
Runway Used:	0	**IFR Approach:**	
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Cain, Jim
Additional Participating Persons:	JOHN WALLEY; PHILIDELPHIA , PA
Original Publish Date:	September 7, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=28302