



National Transportation Safety Board Aviation Accident Final Report

Location:	Creswell, OR	Accident Number:	SEA03LA043
Date & Time:	03/05/2003, 1150 PST	Registration:	N9793B
Aircraft:	Cessna 208B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that prior to takeoff he drained the main lower sump, but not the wing sumps, as was company policy. The pilot stated that he was told by the mechanic that "constant use of the wing sumps causes them to leak, and also causes damage to the fuel cells that is hard to repair." The pilot also reported that the airplane had been fueled a few days prior to the flight from a 55 gallon barrel by an electric pump at the company's fueling facility. Shortly after takeoff, the engine lost power. The pilot initiated a forced landing to an open field. During the landing roll the airplane collided with trees. Post accident inspection of the aircraft found that fuel samples taken from the sumps produced a pint of cloudy, watery substance that was drained from the left wing sump, a mixture of cloudy and clear fuel was drained from the engine fuel sump, and clear jet fuel from the right wing sump. The inspector traveled to the fueling facility and checked the pump glass fuel filter cover, observing it to be half full of what appeared to be water. Two 55 gallon barrels were sitting outside in the rain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Water contamination in the fuel system which resulted in a loss of engine power during the initial climb after takeoff, and the pilot's inadequate pre-flight inspection. Trees were a factor.

Findings

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

Findings

1. (C) FLUID,FUEL - CONTAMINATION,WATER
2. (C) AIRCRAFT PREFLIGHT - INADEQUATE

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

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING

Findings

3. (F) OBJECT - TREE(S)

Factual Information

On March 5, 2003, approximately 1150 Pacific standard time, a Cessna 208B, N9793B, sustained substantial damage during a collision with trees/terrain during a forced landing following a total loss of engine power approximately one mile south of Creswell, Oregon. The airplane was owned and operated by Wright Stuff Inc., Eugene, Oregon, and was being operated as a visual flight rules (VFR) personal flight in accordance with 14 CFR Part 91. The commercial pilot and his three passengers were not injured. Visual meteorological conditions prevailed and a flight plan had not been filed. The flight originated from Creswell at 1148, and was destined for Cottage Grove, Oregon.

In a written statement, the pilot reported that he accomplished a "normal pre-flight" to include sumping fuel from the fuel filter and reservoir. No contaminants were found. The engine was started and the aircraft taxied to the run-up area where a run-up was performed to include the pre-flight checks. The pilot stated that during the climb out, at approximately 500 feet above ground level, he noted a performance loss. The pilot turned the ignition and auxiliary boost switch to on, then looked at the NG gauge and noted that it was below the green area. He took the fuel condition lever out of the idle position to the cut-off position and turned the start switch to start. He counted three seconds and then put the fuel condition lever to low idle. The engine did not regain power and the pilot initiated a forced landing to an open field. During the landing roll, the airplane collided with trees at the end of the field.

According to an FAA inspector, who traveled to the accident site, the pilot reported that prior to takeoff he drained the main lower sump, but not the wing sumps, as was company policy. The pilot stated that he was told by the mechanic that "constant use of the wing sumps causes them to leak, and also causes damage to the fuel cells that is hard to repair." The pilot also reported that the airplane had been fueled a few days prior to the flight from a 55 gallon barrel by an electric pump at the company's fueling facility in Creswell. The inspector traveled to the fueling facility and checked the pump glass fuel filter cover, observing it to be half full of what appeared to be water. Two 55 gallon barrels were sitting outside in the rain.

The FAA inspector said that after turning on the Master switch he observed 350 lbs of fuel in the left tank and 150 lbs of fuel in the right tank, according to the cockpit fuel gauges. The inspector then took fuel samples from the sumps: a pint of cloudy, watery substance was drained from the left wing sump, a mixture of cloudy and clear fuel was drained from the engine fuel sump, and clear jet fuel from the right wing sump. It was noted that the red Bypass indicator was extended on the fuel filter and that the fuel selector was selected to the Both position.

The inspector also reported that there was substantial damage to both wing leading edges, and damage to the horizontal stabilizer, nose landing gear, and engine cowling.

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	22, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last Medical Exam:	07/02/2002
Occupational Pilot:		Last Flight Review or Equivalent:	07/05/2002
Flight Time:	973 hours (Total, all aircraft), 114 hours (Total, this make and model), 906 hours (Pilot In Command, all aircraft), 49 hours (Last 90 days, all aircraft), 33 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Cessna	Registration:	N9793B
Model/Series:	208B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	208B0114
Landing Gear Type:	Retractable - Tricycle	Seats:	20
Date/Type of Last Inspection:	08/23/2002, Continuous Airworthiness	Certified Max Gross Wt.:	8750 lbs
Time Since Last Inspection:	43 Hours	Engines:	1 Turbo Prop
Airframe Total Time:	8274 Hours	Engine Manufacturer:	Pratt & Whitney
ELT:	Installed, not activated	Engine Model/Series:	PT6A-114
Registered Owner:	Wright Stuff INC.	Rated Power:	675 hp
Operator:	Wright Stuff INC.	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	EUG, 365 ft msl	Observation Time:	1154 PST
Distance from Accident Site:	15 Nautical Miles	Direction from Accident Site:	300°
Lowest Cloud Condition:		Temperature/Dew Point:	9° C / 6° C
Lowest Ceiling:	Broken / 2060 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	4 knots, 220°	Visibility (RVR):	
Altimeter Setting:	30.02 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Creswell, OR (77S)	Type of Flight Plan Filed:	None
Destination:	Cottage Grove, OR (61S)	Type of Clearance:	None
Departure Time:	1148 PST	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	43.910278, -123.007500

Administrative Information

Investigator In Charge (IIC):	Thomas M Little	Adopted Date:	09/30/2003
Additional Participating Persons:	Keith D Crimin; FAA-FSDO; Hillsboro, OR		
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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