



Aviation Investigation Final Report

Location:	Clinton, Washington	Accident Number:	SEA02LA028
Date & Time:	January 13, 2002, 14:45 Local	Registration:	N704NY
Aircraft:	Cessna 150M	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot reported that prior to departure for the round robin cross country flight, he visually checked the fuel tanks which he estimated to be about 3/4 full. During the return flight, the engine lost power. The pilot attempted to restart the engine with no success. A forced landing was initiated. During the landing roll, the right horizontal stabilizer collided with a fence post. Post accident examination of the fuel tanks revealed that the right fuel tank contained a small amount of fuel, and the left fuel tank was empty. Fueling records and aircraft rental logs found that the aircraft had previously flown 2.2 hours and had not been refueled. The accident flight was 1.6 hours in duration at the time of the loss of power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel exhaustion while in cruise flight resulting in a loss of engine power and the pilot's failure to refuel the aircraft. The pilot's inadequate preflight planning/preparation and a fence post were factors.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE

Findings

1. (C) FLUID,FUEL - EXHAUSTION

2. (C) REFUELING - NOT PERFORMED - PILOT IN COMMAND
3. (F) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - ROLL

Findings

4. (F) OBJECT - FENCE POST

Factual Information

On January 13, 2002, at 1445 Pacific standard time, a Cessna 150M, N704NY, registered to and operated by Zephyr Aviation Ltd., as a 14 CFR Part 91 instructional flight, experienced a loss of engine power while in cruise flight. The student pilot initiated a forced landing to an open field near Clinton, Washington. During the landing roll, the aircraft collided with a fence. Visual meteorological conditions prevailed at the time and a visual flight rules flight plan was filed. The aircraft was substantially damaged and the student pilot was not injured. The flight originated from Bellingham, Washington, at 1400.

In a written statement, the pilot reported that prior to departing from Tacoma, Washington, for the round robin flight to Bellingham, he checked the fuel level by looking in the wing fuel tanks and then sticking his finger in the filler hole where he was able to touch the fuel and approximating that they were about 3/4 full. The pilot then took off for the flight to Bellingham. The pilot reported that he stopped at Bellingham to use the facilities. The pilot then began the return trip without fueling the aircraft. About 45 minutes after departure, the engine quit. The pilot reported that he attempted to restart the engine without success. The pilot initiated a forced landing to an open field. During the landing roll, the right horizontal stabilizer collided with a fence post.

Federal Aviation Administration Inspectors from the Seattle, Washington, Flight Standards District Office and maintenance personnel from Zephyr Aviation responded to the accident site. During the on-site inspection, the left fuel tank was found empty and the right fuel tank contained a small amount of fuel. The fuel strainer contained approximately 3/4 cup of fuel, and the carburetor bowl contained about 1/2 cup of fuel.

Fueling records and Zephyr's Aircraft Rental Flight Log indicated that the aircraft was last fueled on January 10, 2002. A 2.2 hour flight was accomplished on January 11, 2002. No fuel was added after this flight. The accident flight flew another 1.6 hours for a total of 3.8 hours flown since the last fueling.

The Cessna 150 Owner's Manual indicates that the standard fuel tanks full volume is 26 gallons, with 22.5 gallons useable. The pilot's flight planning log indicated that he estimated using 13.2 gallons for the 212 mile round trip flight, and about two hours and twenty minutes of flight time.

Pilot Information

Certificate:	Student	Age:	37,Male
Airplane Rating(s):	None	Seat Occupied:	Left
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:	April 16, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	55 hours (Total, all aircraft), 55 hours (Total, this make and model), 12 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N704NY
Model/Series:	150M	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Utility	Serial Number:	15078754
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	January 3, 2002 100 hour	Certified Max Gross Wt.:	1600 lbs
Time Since Last Inspection:	8 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5649.7 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-200-A
Registered Owner:	Zephyr Aviation LTD.	Rated Power:	100 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	NUW,47 ft msl	Distance from Accident Site:	24 Nautical Miles
Observation Time:	14:55 Local	Direction from Accident Site:	315°
Lowest Cloud Condition:	Scattered / 1900 ft AGL	Visibility	7 miles
Lowest Ceiling:	Broken / 5000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.35 inches Hg	Temperature/Dew Point:	6°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Bellingham, WA (BLI)	Type of Flight Plan Filed:	VFR
Destination:	Tacoma, WA (TIW)	Type of Clearance:	None
Departure Time:	14:00 Local	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	47.950504,-122.410499(est)

Administrative Information

Investigator In Charge (IIC): Eckrote, Debra

Additional Participating Persons: Harvey W Tharps; FAA-FSDO; Renton, WA

Original Publish Date: June 3, 2002

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=54022>

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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](#).