



National Transportation Safety Board Aviation Accident Final Report

Location:	CHARLOTTESVILLE, VA	Accident Number:	BFO96LA001
Date & Time:	10/01/1995, 1615 EDT	Registration:	N226WR
Aircraft:	RUDY KITFOX 1	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot stated that the airplane was in cruise flight at 2,700 feet MSL when the engine lost power. His attempts to restart the engine were unsuccessful, so he made a forced landing on a golf course. During landing, the airplane collided with tall trees. The pilot stated that the airplane was filled to its capacity (9.5 gallons) at the departure airport. The loss of engine power occurred about 1.5 hours after departure. Postaccident examination revealed that there was no fuel in the carburetor bowl/fuel system. Expected fuel consumption for the engine was 6.5 gallons per hour. The aircraft manufacturer recommended installing a low fuel warning system, but this aircraft was not so equipped.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper fuel management which resulted in fuel exhaustion. A related factor was the pilot's inadequate fuel consumption calculations.

Findings

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

Findings

1. (F) FUEL CONSUMPTION CALCULATIONS - INADEQUATE - PILOT IN COMMAND
2. (C) FLUID,FUEL - EXHAUSTION
3. (C) FUEL MANAGEMENT - IMPROPER - PILOT IN COMMAND

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

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. OBJECT - TREE(S)

Factual Information

On October 1, 1995, at 1615 eastern daylight time, a Rudy Kitfox homebuilt airplane, N226WR, operated by the airplane owner/builder, lost engine power during cruise flight and collided with trees during the forced landing near Charlottesville, Virginia. The certificated private pilot, the sole occupant, was not injured. The airplane was destroyed. The airplane was operated as a personal flight under 14 CFR Part 91. Visual meteorological conditions prevailed for the flight, no flight plan was filed. The flight departed Farmville, Virginia, at approximately 1445. The intended destination was New Market, Virginia.

According to the pilot, he departed New Market and flew to Farmville. He reported that at Farmville he "...refueled, topped [the] main tank (9.5 gallon capacity). It took 7 gallons [of fuel] to fill [the] tank." He stated that about 1.5 hours into the flight the engine lost power, and his attempts to restart the engine were unsuccessful. The pilot stated that when the engine lost power, the airplane was at 2700 feet Mean Sea Level (MSL) over wooded, hilly terrain. He reported that he tried to land on a golf course, but the airplane touched down in a clump of trees short of the intended landing site.

The aircraft was examined at the accident site by a Federal Aviation Administration (FAA) Inspector. The examination revealed no fuel in the carburetor bowl. The FAA Inspector stated that the expected fuel consumption for the accident airplane/engine is 6.5 gallons per hour at 6300-6500 RPM. He reported that the accident airplane had previously only completed short flights, so the actual fuel consumption of that airplane had not been documented. The FAA Inspector also stated that the aircraft manufacturer recommended installing a low fuel warning system. The accident airplane was not equipped with that system.

The pilot reported that there was no mechanical malfunction.

Pilot Information

Certificate:	Private	Age:	45, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
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:	10/12/1993
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	147 hours (Total, all aircraft), 54 hours (Total, this make and model), 20 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	RUDY	Registration:	N226WR
Model/Series:	KITFOX 1 KITFOX 1	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	226
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	07/12/1995, Annual	Certified Max Gross Wt.:	1050 lbs
Time Since Last Inspection:	32 Hours	Engines:	1 Reciprocating
Airframe Total Time:	82 Hours	Engine Manufacturer:	ROTAX
ELT:	Not installed	Engine Model/Series:	532LC
Registered Owner:	WAYNE D RUDY	Rated Power:	64 hp
Operator:	WAYNE D RUDY	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CHO, 641 ft msl	Distance from Accident Site:	40 Nautical Miles
Observation Time:	1548 EDT	Direction from Accident Site:	165°
Lowest Cloud Condition:	Scattered / 4000 ft agl	Visibility	7 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	24° C / 14° C
Precipitation and Obscuration:			
Departure Point:	FARMVILLE, VA (FVX)	Type of Flight Plan Filed:	None
Destination:	NEW MARKET, VA (8W2)	Type of Clearance:	None
Departure Time:	1445 EDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Destroyed
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): BEVERLEY DRAKE-NURSE **Report Date:** 03/21/1996

Additional Participating Persons: EDWARD L HALL; SANDSTON, VA

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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