



Aviation Investigation Final Report

Location:	Woodrow, West Virginia	Accident Number:	ERA12LA045
Date & Time:	October 18, 2011, 16:23 Local	Registration:	N5456C
Aircraft:	GRAFF WILBUR C BEARHAWK	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (partial)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that he was flying in a slow-flight configuration for more than 20 minutes when the engine began to lose power. Although the pilot applied carburetor heat, the engine continued to lose power. The pilot made a forced landing on a highway and collided with a road sign and a ditch. A postaccident engine run was conducted, and no anomalies that would have precluded normal operation were noted. According to the Federal Aviation Administration carburetor icing chart, the weather conditions in the area at the time of the accident were favorable for the accumulation of serious carburetor icing. It is likely that the continued slow flight in those conditions resulted in the loss of engine power due to carburetor icing, and the pilot’s application of carburetor heat was too late.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot’s delayed use of carburetor heat while operating in conditions conducive to carburetor icing.

Findings

Environmental issues	Conducive to carburetor icing - Effect on equipment
Personnel issues	Delayed action - Pilot

Factual Information

History of Flight

Maneuvering	Loss of engine power (partial) (Defining event)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Collision with terr/obj (non-CFIT)

On October 18, 2011, at 1623 eastern daylight time, an experimental amateur-built, Graff Bearhawk, N5456C, experienced a partial loss of engine power and made a forced landing near Woodrow, West Virginia. The airplane sustained substantial damage to the airframe and wings. The personal flight was operating under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed. The private pilot and passenger were not injured. The flight originated from a private strip in Upperglade, West Virginia, at 1745.

The pilot stated that he was flying for approximately 20 minutes in a slow flight configuration. He began to circle around a point for approximately 8 minutes when the engine started to lose power. The carburetor heat was turned on with no increase in power. The engine continued to lose power until altitude could not be maintained. The pilot made a force landing on a highway. During the landing roll out the right wing collided with a sign and the airplane veered off into a ditch. The pilot said that he knew the conditions were favorable for carburetor icing at the time of the flight but he applied the carburetor heat. He did not report any flight control anomalies prior to the flight.

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that the airplane's right wing spar was damaged and the fuselage was buckled. The airplane was recovered, and no anomalies were noted during the engine cursory examination. An engine run was conducted but was limited to 1,800 rpm due to propeller damage. No anomalies were noted during the engine run that would have precluded normal operation.

The nearest weather station was North Central West Virginia (CKB), Clarksburg, West Virginia located approximately 40 nautical miles west of the accident site reported; the ambient temperature at the time of the accident was 72°F and the dew point was 70°F. According to the FAA icing probability chart, this temperature/dew point combination meets the conditions favoring serious icing formation at glide power.

Pilot Information

Certificate:	Private	Age:	48, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	March 3, 2011
Occupational Pilot:	No	Last Flight Review or Equivalent:	March 19, 2010
Flight Time:	(Estimated) 1320 hours (Total, all aircraft), 200 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GRAFF WILBUR C	Registration:	N5456C
Model/Series:	BEARHAWK	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	1
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	June 27, 2011 Annual	Certified Max Gross Wt.:	2500 lbs
Time Since Last Inspection:	21 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	580 Hrs as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	C91 installed, not activated	Engine Model/Series:	O-470 SERIES
Registered Owner:	MCCOURT DWAYNE E	Rated Power:	230 Horsepower
Operator:	MCCOURT DWAYNE E	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CKB,3187 ft msl	Distance from Accident Site:	40 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	300°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.71 inches Hg	Temperature/Dew Point:	22°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Upperglade, WV	Type of Flight Plan Filed:	None
Destination:	Upperglade, WV	Type of Clearance:	None
Departure Time:	17:45 Local	Type of Airspace:	

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:	38.456665,-80.395835

Administrative Information

Investigator In Charge (IIC):	Alleyne, Eric
Additional Participating Persons:	Charles E Monola; FAA/FSDO; Charleston, WV
Original Publish Date:	July 18, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=82146

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