



National Transportation Safety Board Aviation Accident Data Summary

Location:	Hardwick, VT	Accident Number:	ERA13LA397
Date & Time:	09/01/2013, 1030 EDT	Registration:	N31915
Aircraft:	AERONCA 65CA	Injuries:	2 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that a preflight inspection and engine run-up revealed no anomalies. Shortly after the airplane lifted off the runway, the engine began “misfiring” and then experienced a total loss of power. The pilot maneuvered the airplane straight ahead, and it subsequently impacted a tree, which resulted in substantial damage to the forward fuselage, engine firewall, and left wing. Although the pilot and passenger were both seriously injured during the accident, both of their seat belts remained intact and firmly anchored to their respective seats; the belts’ latching mechanisms operated normally.

The engine sustained extensive impact damage, and the crankshaft could not be rotated by hand during postaccident examination. Several of the spark plugs were loose and could be removed by hand; it could not be determined whether the spark plugs had been improperly installed during the airplane’s most recent inspection or sometime thereafter. In addition, the spark plugs exhibited black sooty deposits, which is indicative of the engine operating with an excessively rich fuel/air mixture. Examination of the carburetor revealed that the float needle would not seat properly and that the float level specified by the manufacturer could not be maintained; these conditions would be expected to result in an excessively rich fuel/air mixture at high engine power settings. Therefore, based on the evidence, it is likely that the engine was operating with an excessively rich fuel/air mixture, which resulted in the carburetor flooding and the subsequent loss of engine power. Although the engine maintenance logbooks documented that an overhauled carburetor had recently been installed on the airplane and that a subsequent test run was successfully performed, they did not document when or by whom the carburetor overhaul was performed.

Flight Events

- Initial climb - Loss of engine power (total)
- Emergency descent - Off-field or emergency landing
- Emergency descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The improper maintenance of the carburetor, which resulted in a total loss of engine power due to carburetor flooding.

Findings

- Aircraft-Aircraft power plant-Engine fuel and control-Fuel control/carburetor-Malfunction - C
- Aircraft-Aircraft power plant-Engine fuel and control-Fuel control/carburetor-Incorrect

service/maintenance - C

Personnel issues-Task performance-Maintenance-Repair-Maintenance personnel - C

Personnel issues-Task performance-Record-keeping-Aircraft/maintenance logs-Pilot

Environmental issues-Physical environment-Object/animal/substance-Tree(s)-Contributed to outcome

Pilot Information

Certificate:	Private	Age:	59
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	None
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	92.5 hours (Total, all aircraft), 46.8 hours (Total, this make and model), 92.5 hours (Pilot In Command, all aircraft), 15.5 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	AERONCA	Registration:	N31915
Model/Series:	65CA	Engines:	1 Reciprocating
Operator:	RING DAVID M	Engine Manufacturer:	CONT MOTOR
Air Carrier Operating Certificate:	None	Engine Model/Series:	A&C65 SERIES
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	MVL, 732 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	3 knots, Variable
Temperature:	25°C / 17°C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hardwick, VT (NONE)	Destination:	Morrisville, VT (KMVL)

Airport Information

Airport:	Private Strip (NONE)	Runway Surface Type:	Grass/turf
Runway Used:	N/A	Runway Surface Condition:	Unknown
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC): Allison N Diaz

Adopted Date: 03/17/2015

Investigation Docket: <http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=87977>

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