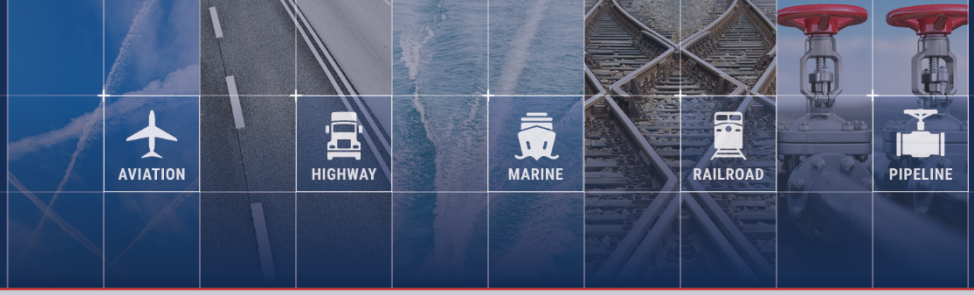

Aviation Investigation Final Report

Location:	Rockland, Maine	**Accident Number:**	ERA10LA453
Date & Time:	August 29, 2010, 14:28 Local	**Registration:**	N2493N
Aircraft:	Cessna 120	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of engine power (partial)	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During the takeoff climb, the pilot noticed that the airplane's engine wasn't producing as much power as it should have been when compared to other flights. The airplane's altitude was insufficient to return to the airport and the pilot performed a forced landing straight ahead. During the forced landing, the airplane impacted trees and a postcrash fire ensued. Examination of the airplane and engine revealed no preimpact abnormalities that could account for the loss of engine power. While weather conditions for carburetor icing were noted as “serious icing – glide power” at the time of the accident, the investigation was unable to determine the cause of the power loss.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power for undetermined reasons.

Findings

Not determined	(general) - Unknown/Not determined
Environmental issues	Tree(s) - Contributed to outcome

Factual Information

History of Flight

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

On August 29, 2010, at 1428 eastern daylight time, a Cessna 120, N2493N, was destroyed when it impacted terrain following a loss of engine power after takeoff from Knox County Regional Airport (RKD), Rockland, Maine. The certificated private pilot was not injured. Visual meteorological conditions prevailed and no flight plan was filed for the local personal flight conducted under the provisions of Title 14 Code of Federal Regulations Part 91.

According to the pilot, during takeoff from runway 31, he noticed the engine “wasn’t producing as much power as it should have been.” The pilot believed he could not safely turn back to the airport and decided to perform a forced landing straight ahead. During the forced landing, the airplane impacted trees before coming to rest on the ground.

The pilot reported he fueled the airplane about 10 days prior to the accident, after his last flight in the airplane. At that time, he "topped the fuel tanks" with 100LL aviation fuel. The pilot additionally reported the carburetor heat was "off" during the takeoff.

A witness, who was flying an airplane in the traffic pattern at RKD observed the accident airplane depart from runway 31, and "appeared to be having difficulty gaining altitude." As the airplane passed the intersection of runway 21 and 31 it drifted to the northeast side of the runway, "still appearing to be having difficulty gaining altitude." As the airplane continued to the northwest it made a couple of shallow turns eventually turning in a westerly direction at low level. The witness lost sight of the airplane as it descended behind trees to the west of the approach lights for runway 13.

The airplane was examined by a Federal Aviation Administration (FAA) inspector after the accident. According to the inspector, the airplane was mostly consumed by a post-crash fire. However, he examined the flight control surfaces and confirmed flight control continuity from the cockpit to the control surfaces. The inspector rotated the engine and confirmed crankshaft, camshaft, and valve train continuity. Both magnetos displayed severe fire damage; however, when the engine was rotated, the impulse coupling of the left magneto was confirmed to be operating. The spark plugs were examined and appeared to be “extremely worn.” Examination of the propeller revealed one blade was bent aft approximately 30 degrees, and the other blade was straight. Neither blade exhibited rotational scoring.

The carburetor and magnetos were removed and disassembled for further examination. No

pre-impact mechanical anomalies were noted. Additionally, the fuel selector was noted to be in the right tank position.

The pilot held a private pilot certificate with a rating for airplane single-engine land. His most recent third-class medical certificate was issued on April 14, 2008. At that time, he reported 181 hours of total flight experience.

The recorded weather at RKD, at 1355, included wind from 260 degrees at 9 knots, gusting to 14 knots, 10 miles visibility, clear skies, temperature 30 degrees C, dew point 18 degrees C, and altimeter setting 30.02 inches of mercury.

A review of the information found on the FAA Carburetor Icing Probability Chart; and given the atmospheric conditions prevailing during take-off, revealed that the airplane was operating within the "serious icing – glide power" range.

Pilot Information

Certificate:	Private	**Age:**	75,Male
Airplane Rating(s):	Single-engine land	**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 With waivers/limitations	**Last FAA Medical Exam:**	April 14, 2008
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	300 hours (Total, all aircraft), 10 hours (Total, this make and model), 275 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N2493N
Model/Series:	120	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	12746
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	September 29, 2009 Annual	**Certified Max Gross Wt.:**	1470 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	809 Hrs at time of accident	**Engine Manufacturer:**	CONT MOTOR
ELT:	Installed, not activated	**Engine Model/Series:**	C85 SERIES
Registered Owner:	HAMILTON WILLIAM L	**Rated Power:**	85 Horsepower
Operator:	HAMILTON WILLIAM L	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	RKD,56 ft msl	**Distance from Accident Site:**	
Observation Time:	13:55 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots / 14 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.02 inches Hg	**Temperature/Dew Point:**	30°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Rockland, ME (RKD)	**Type of Flight Plan Filed:**	None
Destination:	Rockland, ME (RKD)	**Type of Clearance:**	None
Departure Time:	14:27 Local	**Type of Airspace:**	

Airport Information

Airport:	Knox County Regional Airport RKD	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	31	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	44.060001,-69.099166(est)

Administrative Information

Investigator In Charge (IIC):	Andrews, Jill
Additional Participating Persons:	Edward Angelo; FAA/FSDO; Portland, ME
Original Publish Date:	May 26, 2011
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=77115