



AIR SAFETY INVESTIGATION RECIPROCATING MULTI-ENGINE ACCIDENT REPORT

Piper Report#	Code
15082701	C-MIKE
NTSB Report#	
ERA15FA326	

Aircraft Year, Model	Aircraft S/N	"N" Number	A/C TT	A/C Damage	Fire
1980 PA-44-180	44-8095021	N553MD		Destroyed	No
Accident Date/Time	Accident Location	# Occupants/Injuries	Investigation Date		
08/27/15, 0200 EDT	Houlton, ME	1, 1 Fatal	8/29/15		

Owner	Operator
Growl, Inc. [REDACTED] Merritt Island, FL	Same as registered owner
Insurance Company	Insurance Adjuster
Wings Insurance (pilot provided)	U/K
Recovery Company	Misc. Information
Local recovery to airport	N/A

Org	Air Safety Investigator	Org	Air Safety Investigator
PIPER	Mike McClure	FAA	N/A
NTSB	Brian Rayner	Engine	Mike Childers
FAA	Ed Angelo		

Flight Information

Departure Date / Time	8/26/15 / ~2115 EDT	Destination Airport	Houlton, ME / HUL
Departure Airport	Goose Bay, Canada / CYJR		

	None	IFR	VFR	U/K
Flight Plan Filed	☐	☒	☐	☐

Fueling Information	Whom	U/K
When	U/K	Where
	U/K	Amount / Type
		U/K / U/K

	Yes	No	U/K
Was A Problem / Emergency Declared By The Pilot	☐	☒	☐
A copy of the NTSB ATC report, with transcript, is included in Section 6 of this report.			

Weather Information

Location	Houlton International Airport, Houlton, ME	Identifier	HUL
Time	0553 UTC	Wind Direction	230°
		Wind Velocity	03 Knots
Visibility	10 SM		
Sky Condition	Overcast at 400 feet		
Temperature	18°C	Dew Point	17°C
		Altimeter Setting	29.89 inHg

	Yes	No	U/K
Did the Pilot Obtain a Weather Briefing	☐	☐	☒
Where / When	U/K / U/K		

Occupant Information

Pilot	Bakary Doucoure	Certificate Number	
Date Of Birth		Class Medical	1st
Medical Limits	None	Date Medical Issued	04/15/14

Certificates		Date Issued				
Commercial Pilot	☒	07/20/14	☐ Instrument	☒ ASEL	☐ AMEL	☐ Glider
ATP Pilot	☒	07/20/14	☒ Instrument	☐ ASEL	☒ AMEL	☐ Glider
Flight Instructor	☒	07/08/15	☒ Instrument	☒ ASEL	☐ AMEL	☐ Glider
Private Pilot (Foreign Based)	☒	07/25/12	☒ Instrument	☒ ASEL	☐	☐

	Pilot Time PIC	Dual	Aircraft Type Single	Multi	Day	Night	Instrument Actual	Sim	Total Time
This Model									
Other									
Total	2800			1400					3000*

* Times noted from pilot's insurance forms

Last Flight Review	08/08/15
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	Yes	No	Copy	Facility And Address
Autopsy Performed	☒	☐	Inc.	Office of Chief Medical Examiner State House, Station #37 30 Hospital Street, Augusta, ME 04333
Toxicology Tests	☒	☐	Inc.	FAA CAMI, Oklahoma City, OK

Pilot (Name And Address)	Age	Seat	Weight	Injuries
Bakary Doucoure, [REDACTED] France	32	LF	142	Fatal
Passenger(s) (Name And Address)	Age	Seat	Weight	Injuries
None				N/A
None				N/A
None				N/A
Ground Injuries (Name And Address)	Age	Injuries		
None		N/A		

Aircraft Information

Last Inspection Completed Or Significant Maintenance	U/K
Accident History Of Aircraft	A search of the FAA and NTSB databases found no other entries for this aircraft.

	Date	U/K
Last Transponder Check		☒
Last Static Check		☒
Last Altimeter Calibration Check	Altitude	U/K
	ft.	☒

	Overhauled	Overhaul Facility	TSMOH
Left Powerplant	U/K	U/K	U/K

	Overhauled	Overhaul Facility	TSMOH
Right Powerplant	U/K	U/K	U/K

	Yes	No	U/K
Aircraft Operation Manual / Pilot Operating Handbook On Board	☒	☐	☐
Aircraft Registration	☐	☐	☒
Airworthiness Certificate	☐	☐	☒

Aircraft Max. Gross Weight	3800	lbs.	Aircraft C.G. Range	U/K	to	U/K
Calculated Gross Weight	N/A	lbs.	Calculated Aircraft C.G.			U/K
Source Of Weight And Balance	Insufficient information for computation.					

	Yes	No	U/K
Did The Pilot Perform A Weight And Balance Check	☐	☐	☒

Site Information

Latitude	46° 6.083'N			Longitude	67° 48.436'W		
Aircraft Heading	N/A°	Debris Line Heading	14° mag	Debris Length	360 feet	Site Altitude	570 ft.
Obstacles Struck	Trees and terrain			Terrain Condition		Flat, wooded, rural	

GPS Image



On-Site Photo



On-site photo



On-site photo



Aircraft Documentation & Component Condition Codes

B-Broken	F-Fire Damaged	NA- Not Applicable	S-Separated
D- Destroyed	I-Impact Damaged	NO-Not Obtainable	UK-Unknown
DG-Digital	N-No Damage	NL- Not Located	W-Water Damaged
IRS-Impact and or recovery separation			

Aircraft Component	Condition Code(s)	Aircraft Component	Condition Code(s)
Fuselage	I, B, W, D	Nose Gear / Position	I, B, W / Extended
Fwd. Cabin Door	I, B, S, W	Fwd. Baggage Door	I, B, S, W
Aft Cabin Door	N/A	Aft Baggage Door	U/K
Emergency Exit	N/A	Baggage Tie Downs	W

Left Wing	I, B, S, W	Right Wing	I, B, W
Lt Flap / Position	I, S, NL, / U/K	Rt Flap / Position	I, B / U/K
Lt Gear / Position	I / Extended, not locked	Rt Gear / Position	I, B, S / Extended
Pitot Tube	W	Radome	I, B, S

Horizontal Stab.	I, B, W	Vertical Stab.	I, B, W
Pitch Trim Tab	I, W	Rudder	I, W

Flight Control Cable Continuity					
Lt Aileron	Established	Stabilator/Elevator	Established	Rudder	Established
Rt Aileron	Established	Trim Tab	Undetermined	Flap	Established

Surface	Shaft Extension	Threads	L.E. Or T.E.	Position Of Tab
Pitch Trim	1 inch		T. E.	~ 25% nose up, tab down trim
Rudder Trim	1.5 inches		T. E.	Neutral
Flap Jackscrew Position	N/A			

Cockpit Remote ELT Switch				On	☐	Arm	☐	Code(s)		U/K, N/L	
	Model / Type	S/N	Code(s)	ELT				Yes	No	U/K	N/A
ELT	Kannad 406AF	U/K	I, W	Activated At Impact				☐	☐	☒	☐
ELT Battery Date		09/16		Assist In Location				☐	☒	☐	☐

	Manufacturer	Model / S/N	Code(s)
Autopilot	Piper	Altimatic IIIC / U/K	I, W
Misc.	N/A	N/A / N/A	N/A
Misc.	N/A	N/A / N/A	N/A

Left Engine Fuel System			
Fuel Selector Handle Position	On	Electric Fuel Pump Switch	U/K, N/L
Fuel Selector Valve Position	On	Selector Valve Condition	I, W
Fuel Gascolator Screen	N/L, U/K	Fuel Strainer Bowl	N/A
Fuel Found	Yes, carb bowl		
Fuel Tested	Mixed with water, likely from emersion		

Right Engine Fuel System			
Fuel Selector Handle Position	On	Electric Fuel Pump Switch	U/K, N/L
Fuel Selector Valve Position	On	Selector Valve Condition	I, W
Fuel Gascolator Screen	U/K, N/L	Fuel Strainer Bowl	N/A
Fuel Found	No		
Fuel Tested	N/A		

Electrical and Controls				
Master Switch Position	U/K, N/L		Strobe Lights	U/K, N/L
Alternator Switch Position	U/K, N/L	U/K, N/L	Landing Lights	U/K, N/L
Instrument Lights	U/K, I, B		Navigation Lights	U/K, N/L

	Lt	Rt		Lt	Rt
Tach Reading / Hours	N/A	N/A	Hobbs Reading	I, B, U/K	I, B, U/K
Engine Primer Position	Locked	Locked	Cowl Flap Position	U/K	U/K
Carburetor Heat / Alternate Air Position	U/K, I, B	U/K, I, B	Flap Handle Position	I, W / 2nd notch	
Magneto Switch Position	U/K, N/L	U/K, N/L	Emergency Gear Extension	Stowed	

Aircraft Documentation

	Seat Occupied	Lap Belt Used	Shoulder Belt Used	Seats and Restraints, Condition / Description	Code(s)
1.	Yes	Yes	No	Seat secure on tracks, head rest in place, good condition	I, W
2.	No	N/A	N/A	Secure on tracks, left top corner of seat back bent aft, head rest in place, good condition	I, W
3.	No	N/A	N/A	Secure on tracks, no damage, head rest in place, good condition	I, W
4.	No	N/A	N/A	Secure on tracks, no damage, head rest in place, good condition	I, W

Instrument Panel



Instrument Panel



Seats



Left Powerplant

	Manufacturer	Model	S/N	Code(s)
Powerplant	Lycoming	LO-360-E1A6D	L-110-72T	I, W
Carburetor / Servo	HA-6	10-6019	DEA-0212	I, W
Propeller Governor	Woodward	E-3-2-L	3651SJ	I, W
Vacuum Pump*	Tempest	AA3216CW	N47784	I, W, B
Engine Fuel Pump	AC Type	U/K	U/K	I, W, B, S

*Drive was broken and displayed substantial wear, internal rotor was broken.

	Yes	No	Code(s)
Fuel Present In Carburetor / Servo?	☒	☐	W
Any Noticeable Fuel Leaks?	☐	☒	N/A
Fuel Screen Free Of Blockage?	☒	☐	W
Air Inlet Hose/ Filter Free Of Blockage	☒	☐	I, W

	Attached	Position	Not Attached	Code(s)
Throttle Cable Position At Carb. / Servo	☒	U/K	☐	W, IRS
Mixture Cable Position At Carb. / Servo	☒	U/K	☐	W, IRS
Propeller Cable Position At Governor	☒	U/K	☐	W, IRS

	Manufacturer	Model	S/N	Rotation			Code(s)
Turbocharger #1 Lt	N/A	N/A	N/A	☐	☐	☐	N/A
Turbocharger #2 Rt	N/A	N/A	N/A	☐	☐	☐	N/A

	Manufacturer	Model	Condition / Code(s)
Spark Plugs	Champion, Tempest	RHM38E, URHM-38E	CCNC per AV-27, mid service life, average condition

	Manufacturer	Model	S/N	Code(s)
Magneto Dual	TCM	10-785124-121	G07FA081	I, W

Magneto Test	Yes	No	U/K	Results
Magneto Dual	☒	☐	☐	Two towers sparked when manually rotated. Magneto was partially wet.

	Yes	No	U/K		Yes	No	U/K
Crankshaft Rotation	☒	☐	☐	Piston Movement	☒	☐	☐
Accessory Gear Rotation	☒	☐	☐	Valve Train Continuity	☒	☐	☐

Left Propeller

	Manufacturer	Model	Hub S/N	Code(s)
Propeller	Hartzell	U/K	CK2674	I, W, B

Engines



Left engine on right, right engine on left

Right Powerplant

	Manufacturer	Model	S/N	Code(s)
Powerplant	Lycoming	O-360-E1A6D	L-274-77T	I, W
Carburetor / Servo	HA-6	10-5092	CH-5-423	I, W, B, S
Propeller Governor	Norvic	E-3-2	408??	I, W
Vacuum Pump	Tempest	AA3215CC	16649-14	I, W
Engine Fuel Pump	AC Type	U/K	U/K	I, W

	Yes	No	Code(s)
Fuel Present In Carburetor / Servo?	☐	☒	I, W
Any Noticeable Fuel Leaks?	☐	☒	N/A
Fuel Screen Free Of Blockage?	☒	☐	I, W
Air Inlet Hose/ Filter Free Of Blockage	☒	☐	I, W

	Attached	Position	Not Attached	Code(s)
Throttle Cable Position At Carb. / Servo	☒	U/K	☐	IRS
Mixture Cable Position At Carb. / Servo	☒	U/K	☐	IRS
Propeller Cable Position At Governor	☒	U/K	☐	IRS

	Manufacturer	Model	S/N	Rotation			Code(s)
Turbocharger #1 Lt	N/A	N/A	N/A	☐	☐	☐	N/A
Turbocharger #2 Rt	N/A	N/A	N/A	☐	☐	☐	N/A

	Manufacturer	Model	Condition / Code(s)
Spark Plugs	Champion, Tempest	URHM-38E, RHM-38E	Mud filled, rust, average to late service life

	Manufacturer	Model	S/N	Code(s)
Magneto Dual	TCM	10-682553-11	1051768	I, W

	Yes	No	U/K	Results
Magneto Test	☐	☒	☐	Magneto was impact damaged and would not rotate

	Yes	No	U/K		Yes	No	U/K
Crankshaft Rotation	☒	☐	☐	Piston Movement	☒	☐	☐
Accessory Gear Rotation	☒	☐	☐	Valve Train Continuity	☒	☐	☐

Right Propeller

	Manufacturer	Model	Hub S/N	Code(s)
Propeller	Hartzell	HC-C3YR	CK5299B	I, W, B

Pilot Logs and Experience / Medical Information

The pilot, Bakary Doucoure (DOB [REDACTED]), was a contracted ferry pilot and held a French passport issued 10/11/14. He also held a FAA ATP certificate, # [REDACTED], issued 7/20/14 with privileges for multi-engine land airplanes and commercial privileges for single-engine land airplanes. He also held a flight instructor certificate for single and instrument airplanes issued 7/8/15. He held foreign based private pilot certificate # [REDACTED], issued 07/25/12, with privileges for single engine land and instrument airplanes. His insurance application showed a total time of 3000 hours with 2800 hours pilot in command. It also indicated 1400 hours in multi-engine aircraft. Total instrument time was not specified.

Mr. Doucoure was issued a 1st class medical certificate 4/15/14 with no limitations by Charles Kamdoun M.D.

Toxicological and Pathological Information

An autopsy report for the pilot was received from the Maine Office of the Chief Medical Examiner, Augusta, ME. The cause of death was blunt force injuries of the head.

Toxicological testing was performed on the pilot by the FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma. The results showed no tested for drugs were found.

AIRPORT INFORMATION

Houlton International Airport (HUL) was a non-towered airport which operated under class G airspace. The field elevation for the airport was 490 feet msl and the pattern altitude was 1,035 feet msl. The airport was equipped with one asphalt runway. Runway 5/23 was 5,015 feet in length and 100-feet wide. The minimum descent altitude for the RNAV (GPS) RWY 5 approach was 960 feet. According to the procedure notes section the approach was not authorized at night.

METEOROLOGICAL INFORMATION

HUL is equipped with an automated weather observation system (ASOS) and gave the following reports.

At 0553Z or just 17 minutes prior to the accident the weather observation system issued the following report: Winds were from 230 degrees at 3 knots with 10 SM visibility. Overcast ceiling at 400 feet with a temperature of 18C and a dewpoint of 17C. The barometric pressure setting was 29.89 inches.

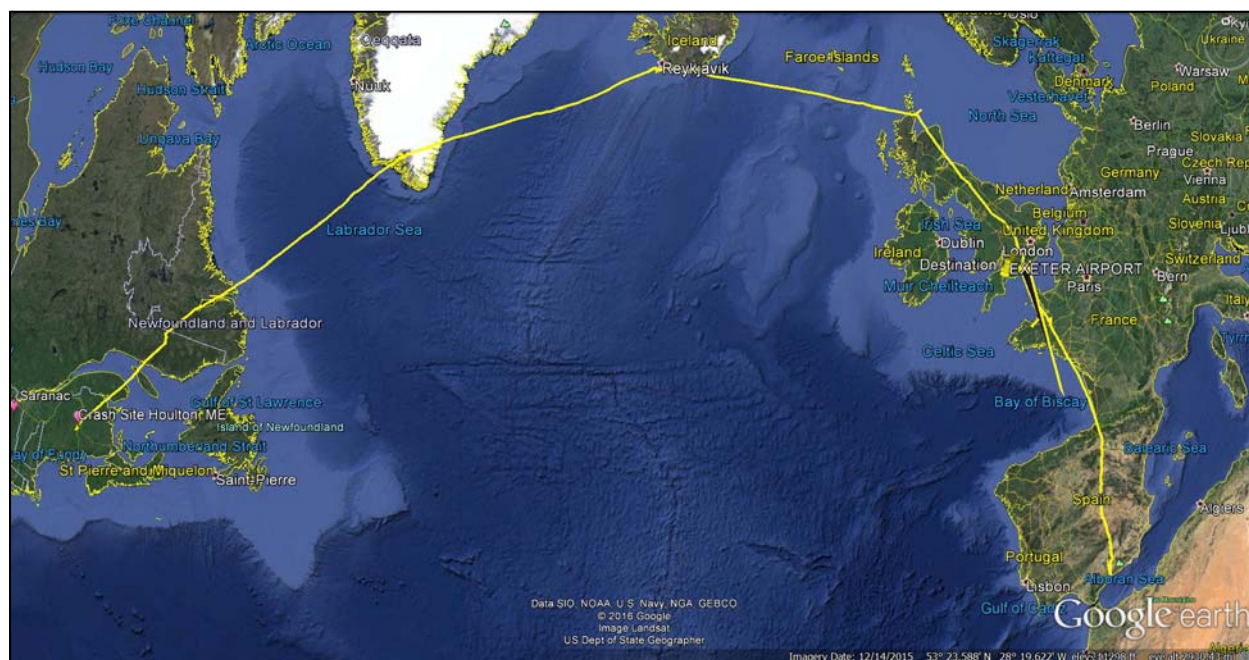
At 0617Z or approximately 17 minutes after the accident a special observation was issued: Wind from 230 degrees at 3 knots with the visibility 1 ¾ SM in mist. The ceiling was 300 feet with a temperature of 18C and a dewpoint of 17C. The barometric pressure setting was 29.88 inches.

Sunset had been at 2120Z the previous day. Moonset was to be 0704Z (0304 EDT). The moon was waxing gibbous with about 94% of the disc illuminated.

A U.S. Customs agent at the field to meet the pilot, heard the aircraft approach and the sound of the crash indicated the "Visibility was extremely poor."

COMMUNICATIONS AND ATC INFORMATION

The airplane was scheduled to be delivered by the pilot to a customer in Florida on the day of the accident. Preliminary radar and air traffic control (ATC) communication information from the Federal Aviation Administration (FAA) revealed that, the airplane had departed Keflavik International Airport (BIKF), Keflavik, Iceland, about 0428 on August 26, and had made intermediate stops in Narsarsuaq, Greenland, and CYJR prior to departing on the accident flight. The layover times of the two stops were each about 4 hours.



During the approach to HUL the pilot was in contact with controllers. The airplane was instructed to maintain 3,500 feet until it reached the initial approach fix (CIYEP), and was cleared for the approach. The airplane descended to about 3,000 feet, crossed CIYEP, reversed course, and tracked approximately along the final approach course of 049 degrees. The intermediate minimum descent altitude prior to CIYEP was 3,000 feet, but the airplane passed CIYEP about 2,500 feet. The airplane continued its descent on the inbound course, and the final radar target was at 1,500 feet about 2.5 miles from the landing runway.

The aircraft struck trees at about 1.25 miles from the approach end of runway 5.

POLICE AND/OR RESPONDER REPORTS

No reports were available.

AIRCRAFT INFORMATION

Damage to the Aircraft

The aircraft was destroyed by impact with trees and terrain and water submersion.

Other Damage

There were no persons or buildings reportedly involved. The aircraft struck trees breaking several limbs and landed in a manmade pond, all on private property. The pond was partially drained and the wreckage removed for examination.

Accident/Incident History

A search of both the FAA and NTSB database found this aircraft had previously also been registered as N81602. No previous accidents were noted for this serial number.

Maintenance Information

Maintenance information was not available.

Airframe and Engine Logbooks

Logbooks were not available.

WRECKAGE/IMPACT INFORMATION

Left Wing

The left wing was separated from the fuselage at the wing root and was broken about 7 feet outboard of the root. The outboard section was fragmented and displayed compression impact damage. The engine and propeller were separated. There was a circular depression starting from the leading edge which penetrated aft which was near vertical and had fibrous material imbedded in the cracked areas of the skin consistent with tree impact. The impact damage penetrated through the wing also separating the flap and fragmenting the aileron. The flap was not recovered but the attach points remained secure to the wing and displayed separations consistent with overload.



The landing gear actuator and gear was extended but not locked. The pitot tube was in place and showed no blockage.

The aileron bellcrank was separated from the wing structure and pulled inboard. Both cables remained secure to the bellcrank. The aileron control cable was separated near the wing root. The remaining portion of the cable was complete to the aileron sectors on the control wheels. The balance cable was intact past the center turnbuckle and was separated near the right side wing root. Both separations were broomstrawed consistent with overload.

Right Wing

The right wing was secure to the fuselage but was broken about 7 feet from the root. The engine and propeller were separated. The separated outboard wing section was recovered with the aileron in place. The flap was secure on the inboard end but the outboard end was loose and folded under the inboard end. The separation

displayed a near vertical circular impact with fibrous material imbedded in the skin consistent with a tree impact.

The right landing gear was separated from the wheel well but the actuator extension was consistent with being extended.

The bellcrank was separated from the structure and pulled inboard and found with the inboard portion of the wing. The aileron control cable was secure to the bellcrank and continuous to the aileron sector. The balance cable was continuous to the area of the wing root where it was broomstrawed.

Empennage

The vertical stabilizer was displayed impact damage but was secure to the fuselage. The rudder also displayed impact damage and was displaced to the left but both hinge points were secure. Both rudder control cables were secure to the rudder sector and continuous to the rudder bar except for the cuts made in the aft cabin area for recovery. The rudder trim drum shaft extension as well as the position of the trim tab was near neutral.

The horizontal stabilator displayed impact damage mostly near the outboard ends, was missing the endcaps, was twisted to the right and was partially attached. The hinge bolts were in place and secure. All stop bolts were in place and undamaged. The balance tube and weight were in place, secure and the push-pull tube was in place and secure. The tube was intact and secure to the stabilator sector in the empennage.

Both control cables were secure to the sector and continuous to the aft fuselage area where they had been cut for transport. The remaining portion of the cables was continuous to the T bar in the cockpit.

The stabilator trim drum extension measured about 1 inch, consistent with a setting of about 25% nose up trim.

Fuselage

The fuselage displayed substantial impact damage to the front, right rear and was fragmented. The top had been pulled back exposing the entire cabin area. The fuselage had been cut aft of the rear seats to facilitate transport. All four seats were in place and secure to the seat tracks. All seats had available seat lap and shoulder belts. The left front seat belt displayed stretching and puckering of the lap belt web. The shoulder belt was not fastened to the lap belt. The right front seat back was twisted left side toward the rear of the aircraft.



The fuel selectors were both positioned in the ON position. The flap handle was in the second notch position. The landing gear selector switch was positioned in the down position. The trim indicators were not evident in the display windows. The engine controls were all in the forward position.

Two altimeters were installed but set to different barometric pressure settings. The left was set at 29.88 and the right side to 29.96 inches. There also was a Sandel SN3500 which was retained for additional analysis. The horizontal attitude indicator was removed and found to not display any external damage other than the front glass had been separated. The unit was disassembled. The gimbal assembly was found free to rotate through full travel. The

pendulous vane housing displayed no external damage or deformation. The vanes were removed and displayed no rotational scoring.

The cabin door was separated from the fuselage and was unremarkable. The nose gear was broken at the lower strut. The nose gear actuator was extended but the upper portion of the gear was broken and not in the locked position.

A yoke mounted Garmin GPS was recovered and retained for analysis by the NTSB.

Left Engine

The left engine displayed impact damage to the number 1 intake pushrod tube. Impact damaged accessories were removed and the crankshaft was rotated by hand at the propeller. Continuity was established from the powertrain through the valve train to the accessory section. The dual magneto remained attached and contained water. Two towers sparked when the magneto was rotated by hand. The carburetor was attached and intact, and disassembly revealed no anomalies. The float bowl contained fuel and water mix.

The engine was equipped with a Tempest dry air pump model AA3216CW, S/N 47784. The pump drive was sheared and displayed substantial wear on the sheared surfaces. Disassembly revealed the rotor was fractured and the vanes were worn to about ½ inch in width.

The oil suction screen was free of blockage. The fuel filter was free of blockage. The governor screen was free of blockage and no metallic debris was noted in the oil filter cartridge.

Right Engine

The right engine displayed impact damage to the number 4 intake and exhaust pushrod tubes. Impact damaged accessories were removed and the crankshaft was rotated by the vacuum pump drive pad. Continuity was established from the accessory section through the valve train to the powertrain. The dual magneto was impact damaged and could not be rotated. The carburetor was impact damaged and separated from the engine.



The oil suction screen was free of blockage. The fuel filter was free of blockage. The governor screen was free of blockage and no metallic debris was noted in the oil filter cartridge.

Left Propeller

The left Hartzell three bladed propeller SN CK2674 was secure to the engine. The blades were labeled A, B & C for identification. Blades A & B were secure in the hub and positioned near the low pitch setting. Blade C was loose in the hub. Blade A showed a gentle aft bend of about 10 degrees with leading edge erosion and chordwise surface scratches. Blade B was mostly straight but had an aft bend of about 90 degrees about 10 inches inboard of the tip. Blade C was loose in the hub and twisted toward the feather position. The blade displayed S bending along the outboard 16 inches of the blade. The blade had leading edge erosion with chordwise surface scratches.

Right Propeller

The right Hartzell three bladed propeller SN CK5299B was secure to the engine. The blades were marked A, B & C for identification. All three blades were loose in the hub. Blade A was bent forward about 10 degrees near mid span and the outboard 10 inches of the tip were bent aft. The blade displayed leading edge abrasion and erosion with chordwise surface scratches. Blade B displayed a gentle aft bend of about 50 degrees near mid span. The blade showed leading edge nicks

and erosion with chordwise surface scratches. Blade C was broken about 6 inches from the tip end. The tip was not recovered. The remaining portion of the blade showed a gentle aft bend of about 20 degrees. The leading edge had nicks, erosion and chordwise surface scratches

TESTS AND RESEARCH

The Sandal SN3500 as well as a hand-held Garmin GPS was retained for analysis in the NTSB material laboratory.

NEWS AND MEDIA INFORMATION

Copies of news articles are included with this report.