



Aviation Investigation Final Report

Location: Charles City, Iowa Accident Number: GAA15CA137

Date & Time: June 24, 2015, 19:00 Local Registration: N5152P

Aircraft: Piper PA 24 Aircraft Damage: Substantial

Defining Event: Fuel exhaustion **Injuries:** 2 None

Flight Conducted Under: Part 91: General aviation - Personal

Analysis

The pilot reported that during a cross-country flight, "the airplane had a complete loss of engine power", and that he made several attempts to restart the engine that were unsuccessful. The pilot made a forced landing in a field where the airplane came to rest after impacting terrain. A post-accident inspection by Federal Aviation Administration Aviation Safety Inspectors revealed that the airplane did not have any usable fuel remaining in its tanks at the time of impact, and that the fuel tanks were undamaged. The airplane sustained substantial damage to the wings, and fuselage.

The pilot reported that there were no mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate pre-flight fuel planning resulting in fuel exhaustion and a collision with terrain.

Findings

Aircraft

Personnel issues Fuel planning - Pilot

Environmental issues Rough terrain - Contributed to outcome

Fuel - Fluid level

Factual Information

History of Flight

Enroute-cruise	Fuel exhaustion (Defining event)	
Landing	Off-field or emergency landing	
Landing	Collision with terr/obj (non-CFIT)	

Pilot Information

Certificate:	Private	Age:	60
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
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:	March 12, 2012
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 12, 2014
Flight Time:	(Estimated) 1032.5 hours (Total, all aircraft), 332.6 hours (Total, this make and model), 26.6 hours (Last 90 days, all aircraft), 14.1 hours (Last 30 days, all aircraft)		

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	Lap only
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

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Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5152P
Model/Series:	PA 24	Aircraft Category:	Airplane
Year of Manufacture:	1958	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	24-168
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	June 6, 2014 Annual	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	57 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5288 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-360-A1A
Registered Owner:	CELEBRATIONS AVIATION LLC	Rated Power:	180 Horsepower
Operator:	CELEBRATIONS AVIATION LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

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Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	KCCY,1125 ft msl	Distance from Accident Site:	2 Nautical Miles
Observation Time:	23:55 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 3100 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.05 inches Hg	Temperature/Dew Point:	21°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BATTLE LAKE, MN (00MN)	Type of Flight Plan Filed:	None
Destination:	OELWEIN, IA (OLZ)	Type of Clearance:	None
Departure Time:	17:00 Local	Type of Airspace:	Class G

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Airport Information

Airport:	Charles City Regional CCY	Runway Surface Type:	
Airport Elevation:	1125 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

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:	43.072498,-92.610832(est)

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Administrative Information

Investigator In Charge (IIC):	Hicks, Michael
Additional Participating Persons:	Brian Lundquist; Federal Aviation Administration; DesMoines, IA
Original Publish Date:	October 8, 2015
Last Revision Date:	
Investigation Class:	<u>Class</u>
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=91434

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available here.

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