



Aviation Investigation Final Report

Location:	Lyons, Kansas	Accident Number:	CEN13LA260
Date & Time:	May 7, 2013, 09:31 Local	Registration:	N731JF
Aircraft:	Cessna A188B	Aircraft Damage:	Substantial
Defining Event:	Fuel contamination	Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The agricultural application airplane was maneuvering at low altitude when it experienced a loss of engine power, descended, and impacted terrain. The impact resulted in substantial damage to both wings and the fuselage. The pilot reported that he had not done a complete preflight examination of the airplane and that not checked the fuel tanks nor had he drained the fuel sumps. There had been rain in the area the night before. A postaccident examination of the airplane disclosed the presence of water contamination in the gascolator, but there were no other preimpact mechanical malfunctions or failures 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 partial loss of engine power due to fuel contamination, which resulted in impact with terrain. Contributing to the accident was the pilot's inadequate preflight inspection, during which, he failed to detect the fuel contamination.

Findings

Aircraft	(general) - Incorrect service/maintenance
Aircraft	Fuel - Inadequate inspection
Personnel issues	Lack of action - Pilot
Personnel issues	Preflight inspection - Pilot

Factual Information

History of Flight

Maneuvering-low-alt flying	Fuel contamination (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)
Post-impact	Part(s) separation from AC

On May 7, 2013, at 0931 central daylight time, N731JF, a Cessna Aircraft Company model A188B single-engine airplane was substantially damaged after impacting terrain near Lyons, Kansas. The pilot sustained minor injuries. The airplane was registered to a private individual and was operated by Rice County Aerial Applicators, Inc., Lyons, Kansas. Visual meteorological conditions (VMC) prevailed at the time of the accident and a flight plan had not been filed for the 14 Code of Federal Regulations Part 137 agricultural application flight. The local flight departed at 0928 from Lyons-Rice County Municipal Airport (LYO), Lyons, Kansas.

The pilot reported that he had completed his first northbound spray run and he then made a 45 degree turn to the northeast to return for a southbound spray run. During the turn when he was about 100 feet agl he experienced a loss of power from the engine. The airplane descended and the right wing struck terrain first resulting in an almost complete separation of both the right wing and empennage from the fuselage. The airplane came to rest upright in a flat wheat field. There was a significant fuel spill, but no postimpact fire.

The pilot was able to exit the cockpit unassisted and several witnesses quickly responded to the accident scene. According to the pilot one of the witnesses told him they had heard the engine quit. Another witness was watching the airplane in flight when he heard the engine "struggling" and it sounded like it "was flooding out".

The pilot reported that he had personally refueled the airplane on the day before the accident. He also reported that he had not done a complete preflight examination of the airplane and that he had not checked the fuel tanks nor had he drained the fuel sumps. Weather radar data and witness reports revealed it had rained in the area the night before. A postaccident examination of the airplane disclosed the presence of water contamination in the gascolator, but there were no other preimpact mechanical malfunctions or failures that would have precluded normal operation.

A postaccident examination and operational test run of the engine showed the ability of the engine to produce rated horsepower.

Pilot Information

Certificate:	Commercial	Age:	24
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	April 19, 2013
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 1, 2011
Flight Time:	(Estimated) 724 hours (Total, all aircraft), 183 hours (Total, this make and model), 617 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N731JF
Model/Series:	A188B	Aircraft Category:	Airplane
Year of Manufacture:	1977	Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	18802926
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	February 2, 2013 Annual	Certified Max Gross Wt.:	3300 lbs
Time Since Last Inspection:	31 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	7095 Hrs as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO 520 SERIES
Registered Owner:	WILLIAM C HOEFFNER	Rated Power:	285 Horsepower
Operator:	RICE COUNTY AERIAL SPRAYERS INC	Operating Certificate(s) Held:	Agricultural aircraft (137)
Operator Does Business As:	RICE COUNTY AERIAL SPRAYERS INC	Operator Designator Code:	R08G

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KHUT,1543 ft msl	Distance from Accident Site:	24 Nautical Miles
Observation Time:	09:52 Local	Direction from Accident Site:	128°
Lowest Cloud Condition:	11000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 11000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / 14 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	17°C / 11°C
Precipitation and Obscuration:	Light - None -		
Departure Point:	Lyons, KS (LYO)	Type of Flight Plan Filed:	None
Destination:	Lyons, KS (LYO)	Type of Clearance:	None
Departure Time:	09:28 Local	Type of Airspace:	

Airport Information

Airport:	Lyons-Rice Co Municipal Arpt LYO	Runway Surface Type:	Concrete
Airport Elevation:	1691 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 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	38.34937,-98.199282(est)

Administrative Information

Investigator In Charge (IIC):	Latson, Thomas
Additional Participating Persons:	Robert Nash; FAA Wichita FSDO; Wichita, KS Andrew Hall; Cessna Aircraft Company; Wichita, KS John Kent; Continental Motors, Inc.; Mobile, AL Lynn Penney; FAA Wichita FSDO; Wichita, KS
Original Publish Date:	February 10, 2014
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=86830

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