



Aviation Investigation Final Report

Location:	Custer, South Dakota	Accident Number:	CEN10CA305
Date & Time:	June 5, 2010, 10:21 Local	Registration:	N2267X
Aircraft:	Cessna 337	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (partial)	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The accident occurred during the first flight since an annual inspection was performed on the airplane. The pilot reported that the airplane was last fueled approximately 5 months before the accident flight, at which time the fuel tanks were topped-off. According to the pilot, after being refueled the airplane was flown about 30 minutes to the accident airport where the annual inspection was performed. The Inspector Authorization (IA) mechanic who performed the annual inspection stated that he ran the engines for about 30 minutes before the annual and about 40 minutes after the inspection was completed. The IA mechanic did not refuel the airplane after the annual inspection. The pilot told a Federal Aviation Administration (FAA) inspector that he did not visually check the fuel tank levels before the accident flight. The pilot stated that after takeoff he remained in the traffic pattern and performed a full stop landing. He then back-taxied on the runway before his next takeoff. After the second takeoff, during initial climb, the pilot noticed that the rear engine was losing power. He applied full power to the forward engine and was able to maintain sufficient altitude to clear a tree line, but the airplane was losing airspeed. He then performed an off-field landing approximately 4 miles from the departure airport. The airplane landed in a soft field, during which the landing gear collapsed and the fuselage, left wing, and left stabilizer were substantially damaged. The pilot stated that after the accident he visually inspected the right main fuel tank and found it empty. He indicated that he had been running the rear engine on the right main fuel tank during the accident flight. A postaccident inspection by a FAA inspector revealed the left main and left auxiliary fuel tanks contained 14 gallons and 17 gallons, respectively. The right main and right auxiliary fuel tanks contained 3 ounces and 3 gallons, respectively. The fuel selectors were all found turned off at the accident site. The rear engine was started and operated between an idle power setting and 1,500 rpm without anomalies. The engine responded to throttle inputs and both of its magnetos were operational during the test run.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A partial loss of engine power due to fuel starvation as a result of the pilot's inadequate fuel mismanagement.

Findings

Aircraft	Fuel - Inadequate inspection
Personnel issues	Preflight inspection - Pilot
Aircraft	Fuel - Fluid management
Personnel issues	Use of equip/system - Pilot
Environmental issues	Rough terrain - Contributed to outcome
Environmental issues	Wet/muddy terrain - Contributed to outcome

Factual Information

History of Flight

Prior to flight	Preflight or dispatch event
Initial climb	Fuel starvation
Initial climb	Loss of engine power (partial) (Defining event)
Landing	Off-field or emergency landing
Landing-flare/touchdown	Landing gear collapse

Pilot Information

Certificate:	Commercial	Age:	62, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Glider	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:	December 7, 2009
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 4, 2009
Flight Time:	587 hours (Total, all aircraft), 46 hours (Total, this make and model), 456 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N2267X
Model/Series:	337	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	337-0167
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	June 3, 2010 Annual	Certified Max Gross Wt.:	4200 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	4811 Hrs as of last inspection	Engine Manufacturer:	Teledyne Continental Motors
ELT:	Installed, not activated	Engine Model/Series:	IO-360-D
Registered Owner:	Grover D. Fulkerson	Rated Power:	210 Horsepower
Operator:	Grover D. Fulkerson	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KCUT,5602 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	10:53 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Overcast / 9000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	17°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Custer, SD (KCUT)	Type of Flight Plan Filed:	None
Destination:	Custer, SD (KCUT)	Type of Clearance:	None
Departure Time:	10:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	Custer County Airport KCUT	Runway Surface Type:	Asphalt
Airport Elevation:	5602 ft msl	Runway Surface Condition:	Dry
Runway Used:	26	IFR Approach:	None
Runway Length/Width:	5500 ft / 60 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	43.733333,-103.617774(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Barry I Dunmire; Federal Aviation Administration, Rapid City FSDO; Rapid City, SD
Original Publish Date:	December 20, 2010
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=76232

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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](#).