Aviation Investigation Final Report

Location:	Gurdon, Arkansas	**Accident Number:**	CEN13LA095
Date & Time:	December 5, 2012, 12:00 Local	**Registration:**	N9493V
Aircraft:	Mooney M20E	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (partial)	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, about 30 minutes into the cross-country flight, the airplane's engine experienced a partial loss of power. The pilot stated that the airplane had departed with 35 to 40 gallons of fuel onboard, and, therefore, that sufficient fuel was remaining when the engine lost partial power. The engine subsequently lost total power when the airplane was about 1,500 feet mean sea level, and the pilot did not have time to troubleshoot the problem before having to shift his focus to identifying a suitable landing area. He completed a forced landing on a nearby road, but, during the landing roll, the left wing contacted a bush, which caused the airplane to depart the roadway and descend into an adjacent ditch. A postaccident engine examination revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation. The airplane's actual fuel load and distribution at the time of accident could not be determined because the airplane was recovered from the accident site before local or federal authorities were notified of the accident. Therefore, it could not be determined whether the airplane experienced fuel starvation/exhaustion during the accident flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The total loss of engine power for reasons that could not be determined because no mechanical engine malfunctions were identified and because the actual fuel load and distribution at the time of the accident could not be determined.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute-cruise	Loss of engine power (partial) (Defining event)
Landing	Off-field or emergency landing
Landing-landing roll	Collision with terr/obj (non-CFIT)

On December 5, 2012, about 1200 central standard time, a Mooney model M20E airplane, N9493V, was substantially damaged when it collided with terrain during a forced landing near Gurdon, Arkansas. The private pilot, the sole occupant, was not injured. The airplane was registered to and operated by a private individual, under the provisions of 14 Code of Federal Regulations Part 91, without a flight plan. Day visual meteorological conditions prevailed for the cross-country flight that departed from Austin Grider Field Airport (PBF), Pine Bluff, Arkansas, about 1130, and was en route to Gurdon Lowe Field Airport (5M8), Gurdon, Arkansas.

The pilot reported that the accident occurred during a repositioning flight after the airplane had undergone avionics maintenance. The pilot stated that about 30 minutes into the flight the airplane experienced a partial loss of engine power, consistent with a lack of available fuel. The pilot stated that the airplane had departed with 35-40 gallons of fuel on-board, and as such, there was still sufficient fuel remaining when the engine lost power. He stated that the airplane was "fairly low" to the ground (about 1,500 feet mean sea level) when a total loss of engine power occurred, and he did not have sufficient time to troubleshoot the lack of engine power before having to focus on identifying a suitable landing area. He noted that he did not turn on the electric fuel pump during his brief attempt to restart the engine. He completed a forced landing on a nearby road, but during the landing roll the left wing contacted a bush located alongside the road, which caused the airplane to depart the roadway and descend into an adjacent ditch. The fuselage and wings were damaged during the accident sequence. Following the accident, without notifying local or federal authorities of the accident, the pilot recovered the airplane wreckage to his company's location in Gurdon, Arkansas.

An engine examination was completed by a Federal Aviation Administration inspector, with the assistance of an aviation mechanic, after the airplane wreckage had been recovered. The engine, a Lycoming model IO-360-A1A, serial number RL-19935-51A, had accumulated 423 hours since it was last overhauled on October 31, 2002. The engine produced suction/compression at each cylinder in conjunction with crankshaft rotation. Additionally, engine valve train and accessory drive continuity was confirmed with crankshaft rotation. The mechanical fuel pump and shower-of-sparks ignition system operated as designed while the engine was rotated using the electric starter motor. The fuel screens were free of any particulate contamination. The postaccident engine examination revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.

The airplane's actual fuel load and distribution at the time of accident could not be determined because the airplane was recovered from the accident site before local or federal authorities were notified of the accident.

Pilot Information

Certificate:	Private	**Age:**	74
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
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:**	February 15, 2012
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	December 26, 2011
Flight Time:	890 hours (Total, all aircraft), 500 hours (Total, this make and model), 4 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N9493V
Model/Series:	M20E	**Aircraft Category:**	Airplane
Year of Manufacture:	1970	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	700047
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	November 14, 2011 Annual	**Certified Max Gross Wt.:**	2575 lbs
Time Since Last Inspection:	7 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3251 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	C91 installed, not activated	**Engine Model/Series:**	IO-360-A1A
Registered Owner:	Roy Ricketts	**Rated Power:**	200 Horsepower
Operator:	Roy Ricketts	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	ADF,182 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	11:56 Local	**Direction from Accident Site:**	30°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 4600 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	60°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	30.23 inches Hg	**Temperature/Dew Point:**	15°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pine Bluff, AR (PBF)	**Type of Flight Plan Filed:**	None
Destination:	Gurdon, AR (5M8)	**Type of Clearance:**	None
Departure Time:	11:30 Local	**Type of Airspace:**	Class G

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:**	33.923889,-93.168052(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Jaime L Black; Federal Aviation Administration - Little Rock FSDO; Little Rock, AR Curtis L Weedman; Federal Aviation Administration - Little Rock FSDO; Little Rock, AR
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Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=85776