



# Aviation Investigation Final Report

<b>Location:</b>	ROCKHILL, South Carolina	<b>Accident Number:</b>	MIA98LA227
<b>Date &amp; Time:</b>	August 16, 1998, 15:10 Local	<b>Registration:</b>	N6411Q
<b>Aircraft:</b>	Mooney M-20F	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot flew to three airports without refueling. While in cruise flight to his destination airport, the airplane experienced a total loss of engine power. He switched fuel tanks, the engine restarted, he climbed to higher altitude, and the engine quit again. A forced landing was made to a soybean field. On landing rollout, the airplane collided with an embankment. Visual examination of the fuel tanks revealed no fuel. Fuel was added to the airplane after recovery. The engine started and developed power.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate fuel management which led to fuel exhaustion.

## Findings

Occurrence #1: LOSS OF ENGINE POWER  
Phase of Operation: CRUISE

- Findings
1. FLUID,FUEL - EXHAUSTION
  2. (C) FUEL MANAGEMENT - INADEQUATE - PILOT IN COMMAND
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Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: LANDING - ROLL

Findings

3. TERRAIN CONDITION - DROP-OFF/DESCENDING EMBANKMENT

## Factual Information

On August 16, 1998, about 1510 eastern daylight time, a Mooney M-20F, N6411Q, registered to a private owner, operating as a 14 CFR Part 91 personal flight, experienced a total loss of engine power in cruise flight in the vicinity of Rockhill, South Carolina. The pilot crashed during a forced landing. Visual meteorological conditions prevailed and no flight plan was filed. The airplane sustained substantial damage. The private pilot and one passenger reported no injuries. The flight originated from Dekalb-Peachtree Airport, Atlanta, Georgia, about 1 hour 25 minutes before the accident.

The pilot stated he initially departed from Asheville, North Carolina, (AVL) with 20 gallons of fuel in the left and right fuel tank. He flew to Monroe, North Carolina, (EQY) and Atlanta, Georgia, (PDK). No fuel was added to the airplane. He departed PDK enroute to EQY. He was in cruise flight when he experienced a total loss of engine power. He was on the left fuel tank which indicated about 1/8 tank of fuel. He switched the fuel tank to the right fuel tank which indicated about 1/4 tank of fuel and initiated a climb. The engine ran about 4 to 5 minutes before the engine quit. He switched the fuel tank back to the left fuel tank with negative results. He made a forced landing to a soybean field, and collided with an embankment on landing rollout.

Examination of the airplane revealed that both fuel tanks were empty. The fuel lines and systems were checked for evidence of leakage or defects, and none was detected. The surrounding area was checked for leakage and none was found. Fuel was added to the left and right fuel tanks. The engine was started and developed power. (For additional information see FAA inspector statement).

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	39, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	December 13, 1996
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	629 hours (Total, all aircraft), 536 hours (Total, this make and model), 536 hours (Pilot In Command, all aircraft), 38 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Mooney	<b>Registration:</b>	N6411Q
<b>Model/Series:</b>	M-20F M-20F	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	670490
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	September 11, 1997 Annual	<b>Certified Max Gross Wt.:</b>	2800 lbs
<b>Time Since Last Inspection:</b>	264 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3323 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-360-A1A
<b>Registered Owner:</b>	RICHARD V. EDNEY	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	AND ,782 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	14:50 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 1000 ft AGL	<b>Visibility</b>	7 miles
<b>Lowest Ceiling:</b>	Broken / 1000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	240°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	32°C / 24°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	ATLANTA , GA (PDK )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	MONROE , NC (EQY )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:45 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	34.930759,-81.019203(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Smith, Carrol
<b>Additional Participating Persons:</b>	JOSEPH S CAMP; COLUMBIA , SC
<b>Original Publish Date:</b>	June 21, 2000
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=43699">https://data.ntsb.gov/Docket?ProjectID=43699</a>

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