



# Aviation Investigation Final Report

<b>Location:</b>	BURLINGTON, Vermont	<b>Accident Number:</b>	NYC83FA256
<b>Date &amp; Time:</b>	September 24, 1983, 13:17 Local	<b>Registration:</b>	CGOEL
<b>Aircraft:</b>	MOONEY M20F	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal, 3 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

ACFT HAD BEEN PARKED ON RAMP AT SYRACUSE FOR APRX 5 DAYS WITH PARTIALLY FULL TANKS & EXPOSED TO RAINY WX. ACCORDING TO THE PLT, THERE WAS NO EVIDENCE OF WATER DURING PREFLIGHT. PLT TAXIED TO ANOTHER AREA WHERE 40 GALS OF FUEL WAS ADDED. FLT FROM SYRACUSE TO BURLINGTON WAS UNEVENTFUL. NO SERVICES WERE OBTAINED AT BURLINGTON BUT 1 QT OF OIL WAS ADDED. AFTERA GROUND TIME OF ABOUT 2 HRS, A TAKEOFF WAS INITIATED FOR THE RETURN FLT TO SYRACUSE. WITNESSES REPORTED THE ENG LOST POWER AT ABOUT 100 FT AGL. ACFT THEN ENTERED A STALL/SPIN, CRASHED & COLLIDED WITH A HELICOPTER. WATER WAS FOUND IN ENG DRIVEN FUEL PUMP, LINE FROM PUMP TO FUEL SERVO, FUEL SERVO, LINE TO MANIFOLD VALVE & INJECTOR NOZZLES. FUEL SELECTOR WAS AT LEFT TANK POSITION. LEFT TANK WAS DAMAGED & EXPOSED TO FIRE FIGHTING AGENT SO PRESENCE OF WATER COULD NOT BE MEASURED. LEFT FUEL CAP WAS DETERIORATED & THERE WAS EVIDENCE IT HAD ALLOWED WATER TO LEAK INTO THE TANK. FUEL TANK HAD THREE BAYS. WATER COULD BECOME TRAPPED AT REAR INBOARD CORNER OF OUTER TANK BAY.

## Probable Cause and Findings

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

## Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) FUEL SYSTEM,CAP - DETERIORATED
2. (C) MAINTENANCE - INADEQUATE - OTHER MAINTENANCE PERSONNEL
3. (C) CONDITION(S)/STEP(S) INSUFFICIENTLY DEFINED - MANUFACTURER
4. (F) WEATHER CONDITION - RAIN
5. (C) FUEL SYSTEM,CAP - LEAK
6. (C) FLUID,FUEL - WATER
7. (C) FUEL SYSTEM,TANK - INADEQUATE
8. (C) ACFT/EQUIP,INADEQUATE AIRFRAME - PRODUCTION/DESIGN PERSONNEL

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Occurrence #2: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: TAKEOFF

### Findings

9. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
10. (C) STALL/SPIN - INADVERTENT - PILOT IN COMMAND

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

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Occurrence #4: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: OTHER

### Findings

11. OBJECT - AIRCRAFT PARKED/STANDING

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	27, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	April 28, 1983
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	542 hours (Total, all aircraft), 4 hours (Total, this make and model), 462 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	MOONEY	<b>Registration:</b>	CGOEL
<b>Model/Series:</b>	M20F M20F	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	22-0036
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	September 1, 1983 100 hour	<b>Certified Max Gross Wt.:</b>	2740 lbs
<b>Time Since Last Inspection:</b>	19 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1865 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-360-A1A
<b>Registered Owner:</b>	WILLIAM D. STEWART	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>	HANCOCK AERO CLUB	<b>Operating Certificate(s) Held:</b>	
<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>	BTV ,334 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	13:17 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered	<b>Visibility</b>	25 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	340°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	10°C / 4°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	SYRACUSE , NY (SYR)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:17 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	BURLINGTON INTERNATIONAL BTV	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	334 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	19	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3600 ft / 150 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	1 Fatal, 2 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal, 3 Serious	<b>Latitude, Longitude:</b>	

## Administrative Information

**Investigator In Charge (IIC):** Richardson, Brian

**Additional Participating Persons:**

**Original Publish Date:**

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=35085>

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