



# Aviation Investigation Final Report

<b>Location:</b>	BOULDER, Colorado	<b>Accident Number:</b>	DEN85LA045
<b>Date &amp; Time:</b>	December 15, 1984, 13:00 Local	<b>Registration:</b>	N79349
<b>Aircraft:</b>	MOONEY M20E	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

THE ACFT MADE AN OFF-ARPT FORCED LANDING AFTER THE ENGINE LOST POWER DURING TAKEOFF. THE FLT INSTRUCTOR AND THE PLT RECEIVING INSTRUCTION HAD FLOWN THIS ACFT FOR AN EARLIER SESSION OF TRAINING DURING THE MORNING. AFTER A BREAK AND BRIEFING THE ACFT WAS RESTARTED. DURING THE ENGINE RUN-UP THE ENGINE RAN ROUGH AND THE MIXTURE WAS LEANED FOR REMEDIAL ACTION BEFORE FURTHER RUN-UP AND CHECK. ENGINE HAD BEEN STARTED ON THE LEFT TANK WHICH WAS USED FOR THE PREVIOUS FLT. SOMETIME PRIOR TO TAKEOFF THE RIGHT TANK WAS SELECTED. AT ABOUT 350 FT AGL AFTER TAKEOFF THE ENGINE LOST POWER. THE CFI TOOK OVER AND CHECKED MOST OF THE CONTROLS WITH NO MENTION OF THE TANK SELECTOR POSITIONING. THE ENGINE DID NOT REGAIN POWER BEFORE THE CFI CUT THE THROTTLE FOR THE LANDING.

## 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  
Phase of Operation: TAKEOFF - INITIAL CLIMB

#### Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

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Occurrence #2: FORCED LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline transport; Flight instructor	<b>Age:</b>	30, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	October 1, 1984
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2766 hours (Total, all aircraft), 26 hours (Total, this make and model), 2613 hours (Pilot In Command, all aircraft), 42 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	MOONEY	<b>Registration:</b>	N79349
<b>Model/Series:</b>	M20E M20E	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	559
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	February 13, 1984 Annual	<b>Certified Max Gross Wt.:</b>	2575 lbs
<b>Time Since Last Inspection:</b>	116 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2363 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>		<b>Engine Model/Series:</b>	IO-360
<b>Registered Owner:</b>	BRUCE MCMILLAN	<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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	60 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(1V5)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	BOULDER MUNI IV5	<b>Runway Surface Type:</b>	Dirt
<b>Airport Elevation:</b>	5288 ft msl	<b>Runway Surface Condition:</b>	Snow
<b>Runway Used:</b>	8	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	4200 ft / 75 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<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>	40.040088,-105.370903(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Winningham, Fred
<b>Additional Participating Persons:</b>	BILL NELSON; BROOMFIELD , CO
<b>Original Publish Date:</b>	
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=16611">https://data.nts.gov/Docket?ProjectID=16611</a>

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