National Transportation Safety Board
Aviation Accident Final Report

Location:	De Lancey, NY	**Accident Number:**	NYC03LA145
Date & Time:	07/01/2003, 1430 EDT	**Registration:**	N1084B
Aircraft:	Mooney M20J	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Analysis

The pilot experienced a power loss while en route, and performed a forced landing with no damage into a field that had once been an airport. The airplane was repaired and the pilot prepared for departure. A farmer cut the grass in the field in a 1,500 foot long, by 50 foot wide area for the pilot to use as a runway. An additional 1,600 had recently been cut by the farmer, and it was not re-cut. The pilot reported he attempted a short field takeoff, lifted at 65 to 70 kts, and the airplane did not climb, He settled back, gained more speed and attempted to lift off again. The airplane would not climb, the trees were approaching, and he aborted the takeoff. The airplane struck trees. The on-board passenger reported that the airplane lifted off at 65 kts, nose high, and settled back on the ground, bounced up again, and then the pilot cut the power. A witness said the airplane became airborne in a nose high pitch attitude, settled back to the ground, became airborne again in a nose high pitch attitude. The pilot cut the power and the airplane struck trees. There were no reported problems with the airplane or engine. According to the FAA approved AFM, the airspeed that the pilot reported he used for takeoff were greater than those specified. The field was located in the bottom of a canyon that was about 1,500 feet wide, and would have required the pilot to climb out while remaining below the top of the surrounding terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's delayed decision to perform an aborted takeoff, which did not allow for sufficient room to stop. A factor was the grass runway.

Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - ABORTED

Findings
1. (F) TERRAIN CONDITION - GRASS
2. (C) ABORTED TAKEOFF - DELAYED - PILOT IN COMMAND
3. OBJECT - TREE(S)

Factual Information

On July 1, 2003, about 1430 eastern daylight time, a Mooney M20J, N1084B, was substantially damaged during an aborted takeoff from a non-designated airstrip in De Lancey, New York. The certificated commercial pilot and passenger were not injured. Visual meteorological conditions prevailed for the positioning flight destined for Doylestown, Pennsylvania (DYL). No flight plan had been filed for the flight that was conducted under 14 CFR Part 91.

The pilot reported that on June 26, 2003, he was cruising at 8,000 feet, en route from Burlington, Vermont (BTV), to Doylestown, when he experienced a total power loss. He set up for forced landing on an abandon airstrip, formerly known as Bishop Airstrip, De Lancey, New York. The landing was completed without damage, and the pilot brought a mechanic in to assess the situation. A problem was discovered in the single drive, dual magneto system. The magneto drive system was repaired, and the airplane released for flight. A mechanic accompanied the pilot on the accident flight.

The field that the pilot landed in was originally an airstrip that was 4,800 feet long, and 50 feet wide. It was orientated 010/190 degrees magnetic. The runway had since been plowed for agricultural use. The current owner of the property on which the airstrip was located reported that he cut the grass in a 1,600 feet, by 50 feet wide swath. He added that the hay beyond the area that he cut for the pilot, had recently been cut and was about 1,500 feet long for a total of 3,100 feet available for takeoff. The owner reported that he offered to cut an additional 400 feet that was located before the cut area; however, the pilot declined the offer.

The pilot stated:

"...after testing the mags and conducting pre-flight, I took off with one passenger. I attempted to make a short field takeoff. At 65 - 70 knots, I pulled the aircraft off. It did not climb. We settled back on the ground, picked up a little more speed and attempted to lift-off. The aircraft would not climb. We were approaching the end of the field, I elected to abort the take-off. We ended up at the end of the field. The left wing hit a tree and came off. The nose gear was also broken off...."

In a follow-up interview, the pilot reported that he aborted the takeoff with about 400 feet remaining to the trees that were ahead When asked, the pilot reported that there were no problems with the engine.

The passenger onboard the airplane stated:

"Power appeared normal. Lift off at 65 kts - nose high - plane settled back onto field - bounced up again - and sees we would not clear trees - pilot cut power - steered slight right, left wing hit tree - tore off. Plane slid approx. 50 ft turned left - exited aircraft."

The mechanic who repaired the engine witnessed the accident. He stated:

"...I installed a repaired magneto on N1084B. Runup was satisfactory. Aircraft attempted a departure to the northeast into a headwind. The farmer mowed a portion of his field for the takeoff. The aircraft accelerated normally but ran off the end of the mowed area. The pilot then lifted off at a high angle of pitch and settled back into the area of higher grass. The pilot continued to takeoff again and lifted off again, with a high angle of pitch. It seemed as he was trying to pull it off the high grass portion of the runway, the aircraft now airborne veered to the southeast and hit a tree..."

The pilot reported the wind was a left quartering crosswind of 8 to 10 knots. The property owner reported the winds were from the west, about 15 knots.

According to the Mooney M20J Pilot's Operating Handbook, and FAA Approved Airplane Flight Manual, for a grass runway takeoff, the lift off speed would range from 55 knots at 2,300 pounds, to 59 knots, at 2,900 pounds. The speed at 50 feet would be 71 knots at 2,300 pounds and 76 knots at 2,900 pounds.

The field was located in the bottom of a stream bed canyon that was about 1,500 feet wide. Higher terrain existed in all quadrants. Initial climb would been in a winding canyon. below the tops of the hills on the surrounding terrain.

Pilot Information

Certificate:	Commercial	**Age:**	73, Male
Airplane Rating(s):	Multi-engine Land; Multi-engine Sea; Single-engine Land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	**Last FAA Medical Exam:**	12/04/2002
Occupational Pilot:		**Last Flight Review or Equivalent:**	11/08/2001
Flight Time:	10000 hours (Total, all aircraft), 800 hours (Total, this make and model), 10 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N1084B
Model/Series:	M20J	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	24-3266
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	12/04/2002, Annual	**Certified Max Gross Wt.:**	2950 lbs
Time Since Last Inspection:	146 Hours	**Engines:**	1 Reciprocating
Airframe Total Time:	2880.2 Hours at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-A
Registered Owner:	907 th Flight squadron Inc.	**Rated Power:**	200 hp
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	BGM, 1636 ft msl	**Distance from Accident Site:**	45 Nautical Miles
Observation Time:	1453 EDT	**Direction from Accident Site:**	285°
Lowest Cloud Condition:	Few / 4700 ft agl	**Visibility**	10 Miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots / 14 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	340°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.14 inches Hg	**Temperature/Dew Point:**	24°C / 13°C
Precipitation and Obscuration:			
Departure Point:	De Lancey, NY (NONE)	**Type of Flight Plan Filed:**	None
Destination:	Dolylestown, PA (DYL)	**Type of Clearance:**	None
Departure Time:	1430 MST	**Type of Airspace:**	Class G

Airport Information

Airport:	Bishop Airstrip (NONE)	**Runway Surface Type:**	Grass/turf
Airport Elevation:	1300 ft	**Runway Surface Condition:**	Dry
Runway Used:	01	**IFR Approach:**	None
Runway Length/Width:	1600 ft / 50 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	42.225278, -74.962778

Administrative Information

Investigator In Charge (IIC):	Robert L Hancock	**Report Date:**	07/29/2004
Additional Participating Persons:	John D Ludwig; Federal Aviation Administration; Albany, NY		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at http://dms.ntsb.gov/pubdms/.		