



National Transportation Safety Board Aviation Accident Final Report

Location:	HEAD WATERS, VA	Accident Number:	BFO95LA054
Date & Time:	06/01/1995, 1730 EDT	Registration:	N3065E
Aircraft:	CESSNA 172N	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

DURING TAKEOFF FROM A WET, GRASS-COVERED, 1,800 FOOT-LONG, PRIVATE AIRSTRIP, THE AIRPLANE LIFTED OFF THEN SETTLED BACK ONTO THE GRASS STRIP. THE PILOT ABORTED THE TAKEOFF ABOUT 1,000 FEET DOWN THE AIRSTRIP. THE PILOT INTENTIONALLY ANGLED THE AIRPLANE OFF THE AIRSTRIP INTO TALL GRASS TO HELP STOP THE AIRPLANE. THE AIRPLANE ROLLED DOWN AN EMBANKMENT AND ITS NOSE GEAR COLLAPSED. THE PILOT STATED HE THOUGHT THE ENGINE DIDN'T SEEM TO BE DEVELOPING FULL POWER. POSTACCIDENT EXAMINATION REVEALED NO EVIDENCE OF PREIMPACT MECHANICAL ANOMALY.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's poor planning/decision making in the attempted departure. Contributing factors are the wet, recently mowed grass airstrip, and the embankment/downhill grade encountered during the aborted takeoff.

Findings

Occurrence #1: OVERRUN

Phase of Operation: TAKEOFF - ABORTED

Findings

1. (F) TERRAIN CONDITION - GRASS
2. (F) TERRAIN CONDITION - WET
3. (C) PLANNING/DECISION - POOR

Occurrence #2: NOSE GEAR COLLAPSED

Phase of Operation: TAKEOFF - ABORTED

Findings

4. (F) TERRAIN CONDITION - DROP-OFF/DESCENDING EMBANKMENT

Factual Information

On June 1, 1995, at 1730 eastern daylight time, a Cessna 172N, N3065E, was substantially damaged during an aborted takeoff from a private airstrip in Head Waters, Virginia. The commercial pilot and the two passengers were not injured. Visual meteorological conditions prevailed. The personal flight was conducted under 14 CFR Part 91, and the intended destination was Manassas, Virginia.

According to a Federal Aviation Administration Safety Inspector, the pilot and passengers departed Manassas to view some property for sale at Head Water. The pilot stated that he landed the airplane on a field which had been a private airstrip years ago. A witness on the ground stated that at the time N3065E landed, the grass was about 12 inches high. The witness stated at the pilot's request he mowed a portion of the field prior to the attempted takeoff.

The pilot reported on his Safety Board Pilot Aircraft Accident Report form, "Performed a soft/short field take off procedure using 10 [degrees] of flaps. As aircraft became airborne it didn't seem to be developing full power....Aborted takeoff going over embankment at end of runway."

According to the FAA Safety Inspector, during an interview with the pilot after the accident, the pilot stated that during the takeoff roll he thought the engine lost about 100 to 150 revolutions per minute. The pilot stated he aborted the takeoff about 1,000 feet down the 1,500 foot long, wet, grass airstrip. He stated he steered the airplane into taller grass in attempt to "...assist the braking action." The pilot said that the airplane "...appeared to almost be stopped, but went down a 4 foot-high embankment at the end of the airstrip." The pilot stated that while rolling down the embankment, the airplane's nose gear collapsed and the airplane nosed down. The left wing contacted the ground damaging the wing's strut.

Postaccident examination of the accident site revealed the airstrip to be a portion of a mowed grass field with the surrounding grass being about 12 inches high. The mowed section of the field was about 20 feet wide and 1,500 feet long. The mowed grass was not removed. About 1,200 feet down the mowed strip there were three ground marks that departed the mowed strip and continued through the taller grass down an embankment.

Postaccident examination of the airframe and engine did not reveal any anomalies.

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	39, Male
Airplane Rating(s):	Multi-engine Land; 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):	Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	06/30/1994
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	792 hours (Total, all aircraft), 321 hours (Total, this make and model), 697 hours (Pilot In Command, all aircraft), 28 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N3065E
Model/Series:	172N 172N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	172-71425
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	04/21/1995, 100 Hour	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:	18 Hours	Engines:	1 Reciprocating
Airframe Total Time:	4134 Hours	Engine Manufacturer:	LYCOMING
ELT:		Engine Model/Series:	O-320-H2AD
Registered Owner:	NAVCOM AVIATION INC	Rated Power:	150 hp
Operator:	NAVCOM AVIATION INC	Operating Certificate(s) Held:	None
Operator Does Business As:	FALCON HEAD FBO	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	5 Miles
Lowest Ceiling:	Broken / 6000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	21 °C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:	MANASSAS, VA (HEF)	Type of Clearance:	
Departure Time:	1730 EDT	Type of Airspace:	Class G

Airport Information

Airport:	PRIVATE AIRSTRIP	Runway Surface Type:	Grass/turf
Airport Elevation:	2000 ft	Runway Surface Condition:	Wet
Runway Used:	35	IFR Approach:	
Runway Length/Width:	1800 ft / 50 ft	VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	MARGARET B NAPOLITAN	Report Date:	10/19/1995
Additional Participating Persons:	DUANE HUNTER; SANDSTONE, VA		
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.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).