



# Aviation Investigation Final Report

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<b>Location:</b>	Detroit Lakes, Minnesota	<b>Accident Number:</b>	CHI07CA306
<b>Date &amp; Time:</b>	September 26, 2007, 11:59 Local	<b>Registration:</b>	N2560M
<b>Aircraft:</b>	Piper PA-12	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The float plane was operated as a rental airplane when it received substantial damage during a hard landing on a lake following an aborted takeoff. The pilot stated that he took off toward the south and that the airplane became airborne "somewhat earlier than [he] anticipated and began to drift to the left." The pilot stated that he saw a peninsula along the flight path and was unsure of the float plane's ability to climb or turn to the right "properly" to avoid it. He then performed an aborted takeoff at 10-15 feet above the lake. He stated that the landing was "firm/hard," and the right fuselage strut partially collapsed into the right float upon landing. The pilot stated that if the float plane was aligned more to the right at lift off, he would have been "OK." He stated that he anticipated a left to right wind but encountered a right to left wind. The airplane rental operator stated that the pilot had two 5-gallon containers of fuel in the rear baggage compartment, and the airplane was over gross weight.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The reduced airplane climb performance capability resulting in the pilot not obtaining a proper climb rate during takeoff and the inadequate flare by the pilot during the aborted takeoff. Additional causes were the inadequate preflight planning/preparation by the pilot, the airplane weight and balance exceeded by the pilot, and the inadequate compensation for wind conditions by they pilot. A contributing factor was the low airspeed at the time of the aborted takeoff.

## Findings

Occurrence #1: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: TAKEOFF - ABORTED

### Findings

1. (C) AIRCRAFT PERFORMANCE, CLIMB CAPABILITY - REDUCED
  2. (C) PROPER CLIMB RATE - NOT OBTAINED - PILOT IN COMMAND
  3. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND
  4. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND
  5. (C) AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND
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Occurrence #2: HARD LANDING  
Phase of Operation: TAKEOFF - ABORTED

### Findings

6. (F) AIRSPEED - LOW
  7. (C) FLARE - INADEQUATE - PILOT IN COMMAND
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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: TAKEOFF - ABORTED

### Findings

8. TERRAIN CONDITION - WATER

## Factual Information

The float plane was operated as a rental airplane when it received substantial damage during a hard landing on a lake following an aborted takeoff. The pilot stated that he took off toward the south and that the airplane became airborne "somewhat earlier than [he] anticipated and began to drift to the left." The pilot stated that he saw a peninsula along the flight path and was unsure of the float plane's ability to climb or turn to the right "properly" to avoid it. He then performed an aborted takeoff at 10-15 feet above the lake. He stated that the landing was "firm/hard," and the right fuselage strut partially collapsed into the right float upon landing. The pilot stated that if the float plane was aligned more to the right at lift off, he would have been "OK." He stated that he anticipated a left to right wind but encountered a right to left wind.

The airplane rental operator stated that the pilot had two 5-gallon containers of fuel in the rear baggage compartment, and the airplane was over gross weight.

### Pilot Information

<b>Certificate:</b>	Airline transport	<b>Age:</b>	68, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	March 1, 2007
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 1, 2007
<b>Flight Time:</b>	19912 hours (Total, all aircraft), 14 hours (Total, this make and model), 12400 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N2560M
<b>Model/Series:</b>	PA-12	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	12-936
<b>Landing Gear Type:</b>	Float	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Annual	<b>Certified Max Gross Wt.:</b>	1833 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Textron Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-320-A2B
<b>Registered Owner:</b>	Super Cub Flyers Inc.	<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>	Super Cub Flyers Inc.	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	DTL	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	10:00 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	9 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	160°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.02 inches Hg	<b>Temperature/Dew Point:</b>	15°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Detroit Lakes, MN	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Long Lake, MN	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	

## 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>	
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	46.825,-95.885559

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gallo, Mitchell
<b>Additional Participating Persons:</b>	Barry Johnson; MSP
<b>Original Publish Date:</b>	November 29, 2007
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=66938">https://data.nts.gov/Docket?ProjectID=66938</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).