



Aviation Investigation Final Report

Location:	MAPLE LAKE, Minnesota	Accident Number:	CHI99LA235
Date & Time:	July 17, 1999, 17:23 Local	Registration:	N88593
Aircraft:	Piper J-3C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The float plane was flown from one lake to another where the pilot picked up a passenger. The pilot reported that during the second take off, he had pitch problems during the climb and that the nose always wanted to pitch up. At approximately 50 to 100 feet, the airplane started turning to the left and the nose pitched down, followed by a crash in the lake. The pilot stated that he did not do a weight and balance or a performance calculation prior to takeoff. The airplane was found with the elevator trim in the full nose down position. The weight and balance of the airplane dated May 12, 1973, recorded the maximum gross weight of the airplane as 1,294 pounds. The approximate weight of the airplane during the accident flight totaled 1420 pounds.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate preflight planning that resulted in exceeding the maximum gross weight of the airplane and the subsequent inadvertent aerodynamic stall.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

2. (C) AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND
3. (C) STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

4. TERRAIN CONDITION - WATER

Factual Information

On July 17, 1999, at 1723 central daylight time, a Piper J-3C, N88593, was substantially damaged when the float equipped airplane departed controlled flight during the takeoff climb and impacted the water. The private pilot and passenger received serious injuries. The 14 CFR Part 91 flight was departing from Maple Lake, Minnesota, on a local flight. Visual meteorological conditions prevailed and no flight plan was filed.

A witness reported the pilot had departed Lake Charlotte near Buffalo, Minnesota, and landed on Maple Lake, near Maple Lake, Minnesota. The witness reported the flight was normal and uneventful. The witness reported that a neighbor of the pilot boarded the airplane for a ride. The witness reported that during takeoff climb, the airplane climbed above treetop level, and then "... abruptly returned to the surface."

A Federal Aviation Administration Aviation Safety Inspector reported that he had interviewed the pilot. The FAA investigator reported that during the course of the interview, the pilot stated that he gave the passenger a ride in the airplane and that the passenger weighed over 200 pounds. The pilot stated that he did not do a weight and balance or a performance calculation. He reported the right fuel tank was full and the left tank was just below one half full. Each tank held 13.5 gallons when full.

The pilot stated the airplane takeoff was to the north. He reported the airplane had pitch problems during the climb and that the nose always wanted to pitch up. He reported that at approximately 50 to 100 feet, the airplane started turning to the left and the nose pitched down, followed by a crash in the lake.

The airplane was found with the elevator trim in the full down position.

The private pilot had approximately 400 total flight hours with 300 hours in type, of which 150 to 175 flight hours were on floats. He had flown about 6 to 8 hours in the float airplane in the last 90 days.

The weight and balance of the airplane dated May 12, 1973, recorded the maximum gross weight of the airplane as 1,294 pounds. The weights listed were:

Aircraft empty weight	868 lbs.
Pilot	170 lbs.
Passenger	170 lbs.

Fuel	66 lbs.
Baggage	20 lbs.
Total	1294 lbs.

The approximate weight of the airplane during the accident flight is listed below:

Aircraft empty weight	868 lbs.
Pilot	191 lbs.
Passenger	235 lbs. (Weight listed on Driver's license)
Fuel left tank 6.75 gal	40 lbs.
Fuel right tank 13.5 gal	81 lbs.
Baggage	5 lbs.
Total	1420 lbs.

Pilot Information

Certificate:	Private	Age:	38, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	September 19, 1997
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	400 hours (Total, all aircraft), 300 hours (Total, this make and model), 8 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N88593
Model/Series:	J-3C J-3C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	16219
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	May 18, 1999 Annual	Certified Max Gross Wt.:	1294 lbs
Time Since Last Inspection:	27 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1775 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	C-90-8
Registered Owner:	FRANCIS CAUGHEY	Rated Power:	90 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MGG ,1028 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	17:11 Local	Direction from Accident Site:	345°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	24°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	17:23 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	45.230098,-94.000373(est)

Administrative Information

Investigator In Charge (IIC):	Silliman, Jim
Additional Participating Persons:	JOHN LYONS; MINNEAPOLIS , MN
Original Publish Date:	June 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46837

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](#).