



Aviation Investigation Final Report

Location:	Trenton, Maine	Accident Number:	IAD01LA030
Date & Time:	January 25, 2001, 16:30 Local	Registration:	N3070N
Aircraft:	Cessna 120	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot said the purpose of the flight was to practice takeoffs and landings in the snow. The landing gear was a tailwheel configuration equipped with skis. During the takeoff, the airplane lifted off prematurely after crossing a small berm. The airplane descended back down onto the snow, the left ski submerged under the surface, the left wing tip and the propeller struck the snow, and the airplane nosed over and came to rest inverted. The pilot reported 130 hours of total flight experience, of which, 30 hours were in make and model and 12 hours were on skis. The pilot said he had no formal instruction in ski-equipped airplanes, and that there were no mechanical deficiencies with the airplane.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper touchdown in the snow after the airplane became prematurely airborne during an attempted takeoff. A factor was the pilot's inadequate training.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. TERRAIN CONDITION - SNOW COVERED
2. (C) TOUCHDOWN - IMPROPER - PILOT IN COMMAND

3. (F) INADEQUATE INITIAL TRAINING - PILOT IN COMMAND
4. SOFT FIELD TAKEOFF/PROCEDURE - PREMATURE - PILOT IN COMMAND

Occurrence #2: NOSE OVER
Phase of Operation: TAKEOFF - ROLL/RUN

Factual Information

On January 25, 2001, at 1630 eastern standard time, Cessna 120, N3070N, was substantially damaged during takeoff from the Hancock County-Bar Harbor Airport (BHB), Trenton, Maine. The certificated private pilot/owner was not injured. Visual meteorological conditions prevailed for the local personal flight that originated at the Bar Harbor Airport, at 1630. No flight plan was filed for the flight conducted under 14 CFR Part 91.

In a telephone interview, the pilot said the airplane was a "taildragger" and was equipped with skis. He said the purpose of the flight was to practice takeoffs and landings on the snow. The pilot/owner said that he had departed Bar Harbor earlier in the day and successfully performed a landing and subsequent takeoff from a nearby frozen lake. He said he returned to Bar Harbor and performed several takeoffs and landings in the snow-covered infield adjacent to runway 35.

According to the pilot:

"I had been up practicing touch-and-goes and full stops. On the takeoff, near as I can tell, what happened was that at takeoff speed, I was pulling back on the yoke when I hit a bump. I went up a little and when I came back down the left ski hit a soft spot in the snow. The right ski stayed on top of the snow, but the left ski came down like there was a soft spot and sunk about 12 to 14 inches into the snow. The ski sunk in and caught.

The ski submarined under the snow and the plane nosed up and over. I was in a takeoff attitude, the toes were up, and I hit this very little bump in the terrain, a little berm. The only reason I would take off on something so small was because of the speed and attitude. But when that ski sunk in, I hit the left wing tip, the nose prop, and pole-vaulted right over and landed completely upside down facing up [runway] 35."

The pilot reported he had approximately 130 hours of total flight experience. He said he had 30 hours of experience in the Cessna 120, 12 hours of which was on skis.

The pilot said other pilots with ski-equipped airplanes had shared with him their knowledge and experience about flight with skis, but that he had no formal instruction flying airplanes equipped with skis. He said, "My insurance company required 10 hours for the tailwheel, but actual instruction on skis, I didn't get that."

The pilot/owner was asked to describe the performance and handling of his airplane. He said:

"Excellent. There was no problem. There wasn't a breath of wind, everything was working good, and it was just one of those things."

The weather reported at Bar Harbor was scattered clouds at 4,300 feet with winds from 320 degrees at 4 knots.

Pilot Information

Certificate:	Private	Age:	46, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
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 None	Last FAA Medical Exam:	February 23, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	September 20, 2000
Flight Time:	130 hours (Total, all aircraft), 30 hours (Total, this make and model), 90 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N3070N
Model/Series:	120	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	13328
Landing Gear Type:	Tailwheel; Ski	Seats:	2
Date/Type of Last Inspection:	March 27, 2000 Annual	Certified Max Gross Wt.:	1450 lbs
Time Since Last Inspection:	34 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3808 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	A-200
Registered Owner:	Stephen M. Robbins	Rated Power:	100 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BHB,100 ft msl	Distance from Accident Site:	
Observation Time:	16:35 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 4300 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	2°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Trenton, ME (BHB)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	16:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	Bar Harbor Airport BHB	Runway Surface Type:	Snow
Airport Elevation:	100 ft msl	Runway Surface Condition:	Snow
Runway Used:	35	IFR Approach:	None
Runway Length/Width:	3364 ft / 75 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	44.449443,-68.361389

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Dennis Trembley; FAA/FSDO; Portland, ME
Original Publish Date:	January 2, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=51390

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