



National Transportation Safety Board Aviation Accident Final Report

Location:	Brainerd, MN	Accident Number:	CEN09CA120
Date & Time:	01/03/2009, 1340 CST	Registration:	N70DD
Aircraft:	BEECH 58	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	2 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

The pilot diverted to a nearby airport after he encountered unforecasted freezing rain. He made two low passes over the airport while trying to clear ice off of the windshield; however, the windshield alcohol de-ice could not keep up with the ice accumulation. The pilot stated that he had to look out of the side window during the landing and once he descended below the tree line, he was unable to accurately judge his height over the runway. He stated that this was compounded by the light color of the new concrete runway which had snow blowing across it. A hard landing resulted after which the pilot taxied the airplane to the ramp. The right wing sustained substantial damage during the landing. The pilot stated that the de-ice systems on the airplane were working, but they could not keep up with the rate of ice accumulation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper flare which resulted in a hard landing. Contributing to the accident was the unforecasted freezing rain that obscured the windscreen and hindered the pilot's ability to judge the height of the airplane above the runway.

Findings

Aircraft	Flight compartment windows - Not specified (Cause)
Personnel issues	Perception - Pilot (Cause) Aircraft control - Pilot (Cause)
Environmental issues	Freezing rain/sleet - Effect on equipment (Cause)

Factual Information

History of Flight

Landing-flare/touchdown	Hard landing (Defining event)
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Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	56, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last Medical Exam:	11/26/2008
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	11/10/2008
Flight Time:	8680 hours (Total, all aircraft), 1560 hours (Total, this make and model), 8304 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 56 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	BEECH	Registration:	N70DD
Model/Series:	58	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	TH-370
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	12/31/2008, Continuous Airworthiness	Certified Max Gross Wt.:	5400 lbs
Time Since Last Inspection:	3 Hours	Engines:	2 Reciprocating
Airframe Total Time:	9894 Hours	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520-CB7
Registered Owner:	BEMIDJI AVIATION SERVICES INC	Rated Power:	285 hp
Operator:	BEMIDJI AVIATION SERVICES INC	Air Carrier Operating Certificate:	On-demand Air Taxi (135)

Meteorological Information and Flight Plan

Observation Facility, Elevation:	BRD, 1232 ft msl	Observation Time:	1353 CST
Distance from Accident Site:		Condition of Light:	Day
Direction from Accident Site:		Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:		Temperature/Dew Point:	-7° C / -11° C
Lowest Ceiling:	Overcast / 2600 ft agl	Visibility	2.5 Miles
Wind Speed/Gusts, Direction:	4 knots, 120°	Visibility (RVR):	
Altimeter Setting:	29.83 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	Haze; No Precipitation		
Departure Point:	Bemidji, MN (BJI)	Type of Flight Plan Filed:	IFR
Destination:	Anoka, MN (ANE)	Type of Clearance:	IFR
Departure Time:	1300 CST	Type of Airspace:	Class E

Airport Information

Airport:	Brainerd - Lakes Regional (BRD)	Runway Surface Type:	Concrete
Airport Elevation:		Runway Surface Condition:	Ice
Runway Used:	16	IFR Approach:	None
Runway Length/Width:	6500 ft / 150 ft	VFR Approach/Landing:	Traffic Pattern

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		

Administrative Information

Investigator In Charge (IIC):	Pamela S Sullivan	Adopted Date:	10/21/2010
Additional Participating Persons:	William Johnson; FAA; Minneapolis, MN		
Publish Date:	08/04/2011		
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
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/ .		

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