National Transportation Safety Board NTSB ID: NYC04IA023 Aircraft Registration Number: N805TH FACTUAL REPORT Occurrence Date: 11/04/2003 Most Critical Injury: None AVIATION Occurrence Type: Incident Investigated By: NTSB Location/Time Nearest City/Place State Zip Code Local Time Time Zone 1947

04401

Distance From Landing Facility: Airport Proximity: On Airport/Airstrip

Aircraft Information Summary

Aircraft Manufacturer Model/Series Type of Aircraft Cessna 208B Airplane

EST

Revenue Sightseeing Flight: No Air Medical Transport Flight: No

ME

Narrative

Bangor

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

On November 4, 2003, at 1947 eastern standard time, a Cessna 208B, N805TH, operated by AirNow, received minor damage while landing, after the pilot encountered en route icing conditions, and diverted to Bangor International Airport (BGR), Bangor, Maine. The certificated airline transport pilot was not injured. Night instrument meteorological conditions prevailed for the flight that departed the Northern Maine Regional Airport (PQI), Presque Isle, Maine, and was destined for Manchester Airport (MHT), Manchester, New Hampshire. An instrument flight rules (IFR) flight plan had been filed and activated for the non-scheduled cargo flight that was conducted under 14 CFR Part 135.

According to the pilot, he obtained a pre-departure weather briefing from the Bangor automated flight service station about 1730, which included a forecast for rain and snow showers. The forecast did not include freezing rain, and the tops of the clouds were forecasted to be 13,000feet, with no ice. The pilot loaded the airplane and departed Presque Isle, about 1840.

While cruising at 8,000 feet in instrument meteorological conditions, the airplane encountered snow, which became freezing rain. The pilot observed ice on the wing de-ice boots, and the windshield. He then activated the airplane's anti-ice and de-ice equipment. The ice remained attached to the de-ice boots, and extended beyond the boots, onto the wings.

The airplane continued to accumulate ice and the pilot requested a descent to 6,000 feet. icing conditions were worse at 6,000 feet, however, the de-ice boots appeared to be working properly. Ice continued to accumulate on the windshield, and the pilot requested a clearance direct to BGR. He descended to 3,000 feet and was flying in rain and sleet. The pilot thought the airplane was accumulating rime ice on the windshield, and clear ice on the wings.

The windshield heat was full on, and the annunciator light for windshield heat was illuminated. The view through the windshield was limited to a small opening, which was decreasing in size. The ice had also accumulated across the sides of the windshield.

The pilot further stated:

"..I told BGR tower that I had trouble seeing through the windshield because of the ice and they gave me a heading so I could see the runway out of the left side window before I could start my approach to the airport. The plane felt sluggish and [I] was cleared for a visual [approach to] runway 33 at BGR. Meanwhile ice had formed beyond the boots and onto the wing, but the de-ice boots were still active. BGR gave me a clearance to do a visual approach. The weather was VFR with light rain. I was cleared to land by the BGR tower. I started my landing, using no flaps and kept the airspeed up to 110 knots. Then crabbed very briefly trying to position the plane to the centerline of the runway to the best of my ability. At this time, I had no forward visibility through the windshield, and looked out the side window to judge the distance above the runway. I

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Narrative (Continued)

also asked BGR tower to turn up the runway lights. There was no time to flare the plane...the left main gear hit the runway hard, the nose wheel hit hard, then a prop strike occurred...."

The airplane was equipped with a cargo pod and cargo pod boot. The pilot reported that the airplane's takeoff weight was 7,280 pounds, which included a fuel load of 1,400 pounds, and 790 pounds of cargo. The airplane's maximum gross takeoff weight was 8,750 pounds.

Examination of the airplane after the incident by a Federal Aviation Administration (FAA) inspector revealed that the nose landing gear fork was fractured, and the nose wheel had separated from the nose landing gear. The left main wheel remained attached to the axle; however, it was bent up. In addition, the tips of the propeller blades were damaged.

A review of the weather briefing received by the pilot revealed that freezing rain was not forecast. The forecast did call for occasional moderate rime and mixed icing in precipitation, and clouds, up to 20,000 feet.

A post incident check of the windshield anti-ice system revealed no discrepancies.

The pilot reported 4,800 hours of total flight experience, which included 2,800 hours in the Cessna 208. In the 90 days which preceded the accident, the pilot had flown 118 hours in the Cessna 208. The pilot completed a company winter operations workshop in September 2003, and a Cessna 208 icing seminar on October 17, 2003.

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AVIATION		Occurre	nce Type:	Incident						
Landing Facility/Approach In	formation									
Airport Name		Air	port ID:	Airport Elevation	Run	way Used	Runwa	y Length	h Ru	inway Width
Bangor International	GR	192 Ft. MSL	33		11440)	20	00		
Runway Surface Type: Asphalt										
Runway Surface Condition: Dry										
Approach/Arrival Flown: Visua	I									
VFR Approach/Landing: Full Stop)									
Aircraft Information										
Aircraft Manufacturer Cessna			Model/ 208B	Series				Serial 1 208B	Number 0609	
Airworthiness Certificate(s): Norm	nal		•				•			
Landing Gear Type: Retractable	- Tricycle									
Amateur Built Acft? No	Number of Seats:	1	Certifie	d Max Gross Wt.		8950	LBS	Numbe	r of Engin	es: 1
Engine Type: Turbo Prop			ngine Ma Pratt & V	nufacturer: /hitney		Model/Se PT6A-1				ated Power: 75 HP
- Aircraft Inspection Information										
Type of Last Inspection		D	ate of Las	t Inspection	Time Si	nce Last Insp	ection		Airframe	Total Time
AAIP		1	0/2003				31 Ho	urs		3518 Hours
- Emergency Locator Transmitter (ELT) Information									
ELT Installed?/Type Yes /		E	LT Operat	ed? No	ELT Aid	ded in Locatin	g Accide	ent Site?	No	
Owner/Operator Information										
Registered Aircraft Owner Street Address 4451 Airport Dr. Ste 201										
Avion Capital Corp.			City Anchorage							Zip Code 99502
			Street A	ddress						•
Operator of Aircraft			1563 Walloomsac Rd.							
AirNow			City Bennington						State VT	Zip Code 05201
Operator Does Business As: AirNow Operator Designator Code: BQTA										
- Type of U.S. Certificate(s) Held:										
Air Carrier Operating Certificate(s)	: On-demand Air 1	Гахі								
Operating Certificate:				Operator Certific	cate:					
Regulation Flight Conducted Unde	r: Part 135: Air Ta	ıxi & Com	muter							
Type of Flight Operation Conducted	d: Non-scheduled	; Domest	ic; Cargo							
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AVIATION

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	AVIATI	ON		Occurrence	ce Type: Inc	ident								
First Pilot	t Information													
Name						City				;	State	Da	te of Birth	Age
On File						On Fi	le			(On File	0	n File	42
Sex: M	Seat Occupied	Left	Oc	cupational Pi	lot? Civilia	n Pilot				Certifi	cate Nu	mber:	On File	
Certificate(s): Airlir	ne Transpor	t											
Airplane Ra	ating(s): Sing	le-engine La	and											
Rotorcraft/0	Glider/LTA:													
Instrument	Rating(s): Airpl	ane												
Instructor F	Rating(s): Airpl	ane Single-	engine											
Current Bie	nnial Flight Revie	w? 05/2003	3											
Medical Ce	ert.: Class 2	Medica	al Cert. Statu	s: Valid Med	dicalw/ wa	aivers/	lim.		Date	e of Last	Medica	l Exar	m: 04/2003	
		l .							_					
- Flight Tim	ne Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Mult-Engine	Nig	ght	Actual	Instrument Si	mulated	Rotorci	aft	Glider	Lighter Than Air
Total Time		4800	2800	4664	136		920							
Pilot In Cor	nmand(PIC)	4339	2785											
Instructor		560												
Instruction	Received										ļ			
Last 90 Da	ys	118							_		<u> </u>			
Last 30 Day		39									-			
Last 24 Ho		4				1			, ,,		1			
Seatbelt Us	sed? Yes	Shou	llder Harness	Used? Yes			Toxico	logy Pei	formed?	No		Seco	nd Pilot? No)
	n/Itinerary													
	ght Plan Filed: IF	R												
Departure I	Point						State	1	Airport Id	entifier	De	partur	e Time	Time Zone
Presque I	sle						ME	1	PQI		18	40		EST
Destination	1						State	,	Airport Id	entifier				
Manchester							NH		МНТ					
Type of Cle	earance: IFR													
Type of Air	space: Class	С												
Weather	Information													
Source of	Wx Information:													
	Flight	Service Sta	tion											
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AVIATION			Occurren	Occurrence Type: Incident								
Weather	Information											
WOF ID	Observation Time	Time Zone	WOF Elevati	ion	WOF Di	istance Fro	m Accid	dent Site		Direction Fron	m Accident Site	÷
BGR	1953	EST	192 Ft.	MSI				NM			Deg.	Mag.
		1	102				<u></u>	Condition of Light: Night/Dark				
Sky/Lowes	st Cloud Condition:					Ft. A	GL	Condition of	of Ligi	it: Night/Dark		
Lowest Ce	eiling: Overcast		5500 Ft.	AGL	Visibi	lity:	10	SM	Alti	meter:	30.45	"Hg
Temperatu	ure: 1 °C [Dew Point:	-12 °C	Weatl	ner Condi	tions at Ac	cident S	Site: Visual (Cond	litions		
Wind Direc	otion: 30	Wind Speed	ı: 7		Winc	d Gusts:						
Visibility (R	RVR): Ft.	Visibility (R\	VV)	SM								!
Precip and	d/or Obscuration:						_					
Accident	Information											
Aircraft Dar	mage: Minor	·	Aircraft Fir	e: None)			Aircraft Exp	olosio	n None		
- Injury Sur	mmary Matrix	Fatal Ser	rious Mino	or	None	TOTAL						
First Pil	ilot				1	,	1					
Second	d Pilot											١
Studen	ıt Pilot]					
Flight In	Instructor						7					
Check I	Pilot]					
Flight E	Engineer						7					
Cabin A	Attendants						7					
Other C	Crew						7					
Passen	ngers						7					
- TOTAL A	ABOARD -				1		1					
Other G	Ground						7					
- GRAND	D TOTAL -				1		1					

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	ormation

Investigator-In-Charge (IIC)

Robert L. Hancock

Additional Persons Participating in This Accident/Incident Investigation:

Mark Auclair Portland FSDO Portland, ME

National Transportation Safety Board Washington, DC 20594

Brief of Incident

Adopted 10/27/2005

NYC04IA023

File No. 18512	11/04/2003	Bangor, ME	Aircraft Reg No.	N805TH	Tim	e (Local): 19:47 EST
Engine Ma Aircraft	ke/Model: Cessna / 208B ke/Model: Pratt & Whitney / PT6A- Damage: Minor Engines: 1	114A	Crew Pass	Fatal 0 0	Serious 0 0	Minor/None 1 0
Operating Cer Name Type of Flight (tificate(s): On-demand Air Taxi of Carrier: AirNow Operation: Non-scheduled; Domest ed Under: Part 135: Air Taxi & Con					
De Airport Airp Runway Idel Runway Length/V	art. Point: Presque Isle, ME Manchester, NH Proximity: On Airport/Airstrip Bangor International atification: 33 Vidth (Ft): 11440 / 200 Asphalt Condition: Dry			Weath Basi Lowe Wind Tempel	c Weather: Vi	eather Observation Facility sual Conditions 600 Ft. AGL, Overcast 0.00 SM
Pilot-in-Command	Age: 42			Flight T	ime (Hours)	
Certificate(s)/Rating(s) Airline Transport; Single-en	gine Land				All Aircraft: 48 st 90 Days: 11	

Instrument Ratings
Airplane

Last 90 Days: 118
Total Make/Model: 2800
Total Instrument Time: UnK/Nr

Printed on: 6/12/2011 8:28:16 AM

Prior to departing on a night cargo flight, the pilot received a weather briefing that included forecast rain and snow, and occasional moderate rime and mixed icing in precipitation, and clouds, on his route of flight. While cruising in instrument meteorological conditions, the airplane encountered freezing rain. The pilot observed ice on the wing de-ice boots, and the windshield. He activated the airplane's anti-ice and de-ice equipment; however, the airplane continued to accumulate ice and the pilot diverted to another airport. The pilot reported that the airplane "felt sluggish" and that "ice had formed beyond the boots and onto the wing, but the de-ice boots were still active." He also reported that he conducted the approach with no forward visibility, and he looked out the side window to judge the distance above the runway. The pilot also stated that he did not use any flaps during the approach, and the airspeed was maintained at 110 knots. The pilot stated he did not have time to flare the airplane. The airplane landed hard, which resulted in damage to the landing gear and propeller. Examination of the airplane, which included the windshield de-ice system did not reveal any discrepancies. The airplane was equipped with a cargo pod and cargo pod boot. The pilot reported that the airplane's takeoff weight was 7,280 pounds. The airplane's maximum gross takeoff weight was 8,750 pounds.

Brief of Incident (Continued)

NYC04IA023

File No. 18512 11/04/2003 Bangor, ME Aircraft Reg No. N805TH Time (Local): 19:47 EST

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: CRUISE - NORMAL

Findings

1. (C) WEATHER CONDITION - ICING CONDITIONS

Occurrence #2: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. (C) WINDOW, FLIGHT COMPARTMENT WINDOW/WINDSHIELD - ICE

3. FLARE - INADEQUATE - PILOT IN COMMAND

4. VISUAL/AURAL DETECTION - PILOT IN COMMAND

Findings Legend: (C) = Cause, (F) = Factor

The National Transportation Safety Board determines the probable cause(s) of this incident as follows.

The pilot's inability to see through the windshield, which was obscured due to icing conditions. This resulted in the pilot's inadequate flare, and a subsequent hard landing. A factor contributing to the accident was the wing icing.