



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	BETHEL, AK	<b>Accident Number:</b>	ANC00LA021
<b>Date &amp; Time:</b>	12/24/1999, 1045 AST	<b>Registration:</b>	N1864
<b>Aircraft:</b>	Cessna T207A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor, 5 None

**Flight Conducted Under:** Part 135: Air Taxi & Commuter - Scheduled

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## Analysis

The certificated commercial pilot, with five passengers aboard, was departing runway 18 on a scheduled commuter flight. The pilot stated that the flight's original departure time was delayed for two hours due to ice fog, and low visibility. He said that just after takeoff, the engine surged followed by a loss of power. The airplane collided with snow-covered terrain during an off-airport emergency landing, and sustained substantial damage to the propeller, fuselage, and wings. Following retrieval of the airplane, an FAA airworthiness inspector examined the airplane, and found no mechanical anomalies. While still attached to the airplane, the engine was started and run at idle. The engine later produced full power on an engine test stand. A pilot-rated Alaska State Trooper, with extensive experience in the accident airplane make and model, examined the airplane soon after the accident. He said the wings, horizontal stabilizer, and elevators had an accumulation of frost.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to remove frost from the airplane prior to flight, and an inadvertent stall/mush.

## Findings

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

### Findings

1. (C) ICE/FROST REMOVAL FROM AIRCRAFT - NOT PERFORMED - PILOT IN COMMAND
2. (C) STALL/MUSH - INADVERTENT - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

## Factual Information

On December 24, 1999, about 1045 Alaska standard time, a wheel equipped Cessna T207A airplane, N1864, sustained substantial damage after colliding with snow-covered terrain during takeoff from the Bethel Airport, Bethel, Alaska. The flight was being conducted under Title 14, CFR Part 135, as a scheduled commuter flight, operated by Grant Aviation, Inc., as Flight 281. The certificated commercial pilot sustained minor injuries, and the five passengers aboard were not injured. Visual meteorological conditions prevailed, and company visual flight rules (VFR) flight following procedures were in effect for the flight to Chefnak, Alaska.

During a telephone conversation with the National Transportation Safety Board investigator-in-charge on December 24, the pilot reported that he did a preflight inspection of the accident airplane in anticipation of a 0900 departure time. He said that during the preflight inspection, he removed an accumulation of frost from the wings, and horizontal stabilizer. After completing the preflight inspection, the original departure time was delayed due to ice fog, and low visibility. He said that about 2 hours later the weather appeared to be improving, so he elected to load his passengers on board the airplane, anticipating that weather conditions would improve soon. The accident pilot reported that while taxiing to the active runway, weather conditions were still below basic VFR conditions, with fog and low visibility. He said that as the accident airplane neared the active runway, the Bethel Air Traffic Control Tower (ATCT) reported that weather conditions had improved, and that the Bethel Airport was now operating under VFR conditions. The accident airplane was then issued a takeoff clearance for runway 18, at intersection golf. The accident pilot stated while departing runway 18, about 20 feet above the runway, the engine surged followed by a loss of power. He said that emergency engine procedures did not restore power. The airplane collided with snow-covered terrain during an off-airport emergency landing, and sustained substantial damage to the fuselage and wings.

On December 25, company and insurance personnel retrieved the airplane from the accident site, and transported it to the operator's hangar at the Bethel Airport.

On December 28, a Federal Aviation Administration (FAA) airworthiness inspector, Anchorage Flight Standards District Office, traveled to Bethel, and examined the airplane at the operator's facility. He reported there were no engine or airframe mechanical anomalies revealed during the inspection. The FAA inspector said that he was present when the engine was started and operated while still attached to the accident airplane. He added that the engine was only operated at idle speed due to substantial airframe damage.

The engine was removed from the accident airplane and transported to Anchorage, Alaska.

On January 13, 2000, with the National Transportation Safety Board investigator-in-charge present, the engine was operated on an engine test stand. The engine produced full rated power.

A pilot-rated Alaska State Trooper, with extensive experience in the accident airplane make and model, examined the airplane following the rescue of the pilot and passengers. He reported that during his inspection he discovered that the wings, horizontal stabilizer, and elevators had an accumulation of frost.

The closest weather observation station is Bethel. On December 24, at 1053, an Aviation Routine Weather Report (METAR) was reporting in part: Sky conditions and ceiling, 100 feet

scattered; visibility, 6 statute miles; wind, 020 degrees at 6 knots; temperature, minus 23 degrees F; dew point, minus 27 degrees F; altimeter, 29.87; remarks, patches of fog.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	40, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<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 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	05/05/1999
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2507 hours (Total, all aircraft), 1080 hours (Total, this make and model), 2395 hours (Pilot In Command, all aircraft), 232 hours (Last 90 days, all aircraft), 59 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N1864
<b>Model/Series:</b>	T207A T207A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	20700526
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	12/22/1999, 100 Hour	<b>Certified Max Gross Wt.:</b>	3800 lbs
<b>Time Since Last Inspection:</b>	4 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	9809 Hours	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-520-F
<b>Registered Owner:</b>	GRANT AVIATION, INC.	<b>Rated Power:</b>	300 hp
<b>Operator:</b>	GRANT AVIATION, INC.	<b>Operating Certificate(s) Held:</b>	Commuter Air Carrier (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	ENHA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PAB, 123 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1053 AST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 100 ft agl	Visibility	6 Miles
Lowest Ceiling:	Unknown / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	-31°C / -18°C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	Company VFR
Destination:	CHEFORNAK, AK (CFK)	Type of Clearance:	None
Departure Time:	1045 AST	Type of Airspace:	Class D

## Airport Information

Airport:	BETHEL (BET)	Runway Surface Type:	Asphalt
Airport Elevation:	123 ft	Runway Surface Condition:	Snow--dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	6398 ft / 150 ft	VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	5 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 5 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	CLINTON O JOHNSON	Report Date:	12/04/2000
Additional Participating Persons:	DAVID M WITHROW (FAA); ANCHORAGE, AK		
Publish Date:			
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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).