



# National Transportation Safety Board Aviation Accident Final Report

<b>Location:</b>	BETHEL, AK	<b>Accident Number:</b>	ANC97LA010
<b>Date &amp; Time:</b>	12/04/1996, 0954 AST	<b>Registration:</b>	N20024
<b>Aircraft:</b>	Cessna 172M	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

## Analysis

The pilot and two passengers were departing on a cross-country on-demand charter flight. The airplane was 120 pounds below maximum gross weight. The pilot departed runway 11, but after lift off, the airplane would not climb. The airplane collided with snow covered tundra terrain about 1/8 mile from the departure end of the runway. The operator indicated the pilot and a mechanic passenger observed the airplane lights flicker on and off, and smelled an odor of overheated electrical wiring. An inspection of the airplane by the FAA did not reveal any mechanical malfunction. The wind conditions at the airport, from just before and just after the accident, varied from 300 to 312 degrees at 9 knots.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper planning/decision, and resultant failure to obtain/maintain sufficient airspeed during takeoff. A factor related the accident was: taking off with a tailwind.

## Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: TAKEOFF

### Findings

1. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
2. (F) WEATHER CONDITION - TAILWIND
3. (C) AIRSPEED - NOT OBTAINED/MAINTAINED - PILOT IN COMMAND
4. (C) STALL/MUSH - INADVERTENT - PILOT IN COMMAND

## Factual Information

On December 4, 1996, at 0954 Alaska standard time, a wheel equipped Cessna 172M, N20024, collided with terrain during takeoff from the Bethel Airport, Bethel, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country on-demand passenger flight to Napaskiak, Alaska, under Title 14 CFR Part 135 when the accident occurred. The airplane, registered to Village Aviation Inc., Bethel, and operated by Camai Air as flight number 24, sustained substantial damage. The certificated commercial pilot, and 2 passengers were not injured. Visual meteorological conditions prevailed. VFR company flight following procedures were in effect.

The operator reported that the airplane departed runway 11. The airplane lifted off the ground but would not climb. The airplane collided with snow covered tundra terrain about 1/8 mile from the departure end of the runway. The airplane received damage to the landing gear, fuselage, and right wing. The operator indicated that the pilot and a mechanic passenger observed the airplane lights flicker on and off and smelled an odor of overheated electrical wiring.

A Federal Aviation Administration (FAA) inspector examined the airplane at the accident site. No mechanical malfunction was noted. The FAA inspector reported the airplane was 120 pounds under maximum gross weight. The FAA also indicated the pilot reported rotating the airplane for takeoff at 60 to 65 MPH.

The closest official weather observation station is Bethel, Alaska. At 0952, an aviation routine weather report (METAR) was reporting in part: Wind, 330 degrees (true) at 9 knots; visibility, 10 miles; sky condition and ceiling, few clouds at 5,000 feet, few clouds at 20,000 feet; temperature, -4 degrees F; dew point, -10 degrees F; altimeter, 29.10 inHg.

At 1006, a special observation was reporting in part: Wind, 320 degrees (true) at 9 knots; visibility, 20 miles; sky condition and ceiling, few clouds at 5,000 feet, few clouds at 20,000 feet; temperature, -4 degrees F; dew point, -10 degrees F; altimeter, 29.10 inHg; remarks, aircraft mishap.

At 0953, the automatic terminal information service (ATIS) for the Bethel airport was reporting, in part: "Bethel Tower information foxtrot, at 0854; wind, 300 at 9 knots; visibility, 10 miles; sky condition and ceiling, few clouds at 5,000 feet; temperature, -20 C; dew point temperature, -24 C; altimeter, 29.08 inHg..."

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	39, Male
<b>Airplane Rating(s):</b>	Single-engine Land; Single-engine Sea	<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--no waivers/lim.	<b>Last FAA Medical Exam:</b>	01/26/1996
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1200 hours (Total, all aircraft), 400 hours (Total, this make and model), 1180 hours (Pilot In Command, all aircraft), 170 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N20024
<b>Model/Series:</b>	172M 172M	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	17260940
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	11/04/1996, 100 Hour	<b>Certified Max Gross Wt.:</b>	2300 lbs
<b>Time Since Last Inspection:</b>	81 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	12764 Hours	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-320-E2D
<b>Registered Owner:</b>	VILLAGE AVIATION	<b>Rated Power:</b>	150 hp
<b>Operator:</b>	VILLAGE AVIATION	<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>	CAMAI AIR	<b>Operator Designator Code:</b>	HYQA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	BET, 123 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	0952 AST	Direction from Accident Site:	290°
Lowest Cloud Condition:	Scattered / 5000 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	-20°C / -18°C
Precipitation and Obscuration:			
Departure Point:	(BET)	Type of Flight Plan Filed:	Company VFR
Destination:	NAPASKIAK, AK (PKA)	Type of Clearance:	VFR
Departure Time:	0953 AST	Type of Airspace:	Class D

## Airport Information

Airport:	BETHEL (BET)	Runway Surface Type:	Gravel
Airport Elevation:	123 ft	Runway Surface Condition:	Snow--compacted
Runway Used:	11	IFR Approach:	None
Runway Length/Width:	1850 ft / 75 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	SCOTT R ERICKSON	Report Date:	03/31/1998
Additional Participating Persons:	TED J NOVOTNEY; 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> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).