



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	KIVALINA, AK	<b>Accident Number:</b>	ANC95LA046
<b>Date &amp; Time:</b>	04/17/1995, 1300 AKD	<b>Registration:</b>	N898AL
<b>Aircraft:</b>	DOUGLAS C54GDC	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None

**Flight Conducted Under:** Part 91: General Aviation - Business

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## Analysis

THE FOUR ENGINE TRANSPORT CATEGORY AIRPLANE WAS CARRYING A LOAD OF FUEL OIL FOR DISTRIBUTION TO THE VILLAGE OF KIVALINA. THE PILOT REPORTED HE FLEW OVER THE 3,000' LONG BY 60' WIDE STRIP PRIOR TO LANDING, AND NOTED IN THE CENTER OF THE RUNWAY SOME GRAVEL WAS VISIBLE THROUGH A LAYER OF SURROUNDING SNOW. HE SAID HE COULD NOT SEE ANY SNOW BANKS OR DEEPER SNOW IN THE LANDING AREA, AND AVAILABLE NOTICES TO AIRMEN DID NOT MENTION ANY SNOW BANKS OR SNOW BERMS ON THE RUNWAY. THE PILOT SAID THE AIRPLANE LANDED NEAR THE THRESHOLD AND ON THE CENTER LINE, BUT, THE LEFT MAIN LANDING GEAR SOON ENCOUNTERED A SNOW BERM AND THE AIRPLANE WAS PULLED TO THE LEFT. THE AIRPLANE SUBSEQUENTLY IMPACTED OTHER SNOW BERMS ON THE LEFT SIDE OF THE RUNWAY AND THE NOSE LANDING GEAR COLLAPSED. THE U.S. GOVERNMENT'S SUPPLEMENT FOR ALASKA AIRPORTS, FOR THE KIVALINA AIRPORT, STATES, IN PART: UNATTENDED. CAUTION: RWY CONDITION NOT MONITORED, RECOMMEND VISUAL INSPECTION PRIOR TO USING.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S FAILURE TO IDENTIFY A HAZARDOUS LANDING AREA. FACTORS IN THE ACCIDENT ARE THE PRESENCE OF SNOW BANKS/BERMS ON THE RUNWAY, AND THE INADEQUATE SNOW REMOVAL BY AIRPORT PERSONNEL.

## Findings

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Occurrence #1: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: LANDING - ROLL

### Findings

1. (F) AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - SNOWBANK
2. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - NOT IDENTIFIED - PILOT IN COMMAND  
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Occurrence #2: NOSE GEAR COLLAPSED  
Phase of Operation: LANDING - ROLL

### Findings

3. LANDING GEAR, NOSE GEAR - OVERLOAD

## Factual Information

On April 17, 1995, about 1300 Alaska daylight time, a Douglas C54GDC airplane, N898AL, sustained substantial damage while landing at the Kivalina Airport, Kivalina, Alaska. Neither the airline transport certificated captain, the commercial certificated copilot, or the company employee jump seat rider were injured. The 14 CFR Part 91 flight was being operated in visual meteorological conditions. A company flight plan was filed. The airplane was hauling fuel oil to be distributed at Kivalina.

The pilot reported in his written report to the NTSB that he had checked with the Galena Federal Aviation Administration Flight Service Station prior to departing for Kivalina. He said the only Notice To Airmen he received for Kivalina was that the runway had thin, packed snow on it. Upon reaching Kivalina, the pilot said he overflew the runway, and saw that, "...some of the runway lights were visible, none of the snow berms or snow drifts were visible. A little gravel was showing on the center line of the runway. Because of the time of day, there were no shades or any other indications of the height of the snow surrounding the runway..." The pilot's statement continues: "Shortly after touchdown (within 200' of the threshold and on the centerline) we hit with the left main gear a snow drift which pulled the airplane to the left. Staying a little left of the centerline we hit several more snow berms with the left main gear...the last snow berm we hit made the airplane pivot to the left stopping in the packed snow pointing approximately 70 degrees to the left from the runway heading with the left main just outside the runway lights and the right main inside the lights. The impact took out the nose gear and damaged the nose section of the aircraft."

The U.S. Government Alaska Airport Supplement, under Kivalina, Airport Remarks, states, in part: Unattended. CAUTION: RWY condition not monitored, recommend visual inspection prior to using.

The Kivalina Airport is owned by the State of Alaska, and runway maintenance is delegated to the City of Kivalina via a contractual agreement. The portion of the contract agreement pertaining to snow removal is appended.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor	<b>Age:</b>	25, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; 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>	Yes
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last Medical Exam:</b>	04/04/1995
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	3500 hours (Total, all aircraft), 2000 hours (Total, this make and model), 2000 hours (Pilot In Command, all aircraft), 250 hours (Last 90 days, all aircraft), 80 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	DOUGLAS	<b>Registration:</b>	N898AL
<b>Model/Series:</b>	C54GDC C54GDC	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	35986
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	66700 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	4 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	R-2000
<b>Registered Owner:</b>	BROOKS FUEL, INC.	<b>Rated Power:</b>	1450 hp
<b>Operator:</b>	BROOKS FUEL, INC.	<b>Air Carrier Operating Certificate:</b>	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Observation Time:	0000
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Temperature/Dew Point:	-12°C / -14°C
Lowest Ceiling:	None / 0 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	12 knots, 45°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	GALENA, AK (GAL)	Type of Flight Plan Filed:	VFR
Destination:	(KVL)	Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	Class E

## Airport Information

Airport:	KIVALINA (KVL)	Runway Surface Type:	Gravel
Airport Elevation:	10 ft	Runway Surface Condition:	Snow--compacted; Snow--dry
Runway Used:	12	IFR Approach:	None
Runway Length/Width:	3000 ft / 60 ft	VFR Approach/Landing:	Traffic Pattern

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	JAMES D LA BELLE	Adopted Date:	09/24/1995
Additional Participating Persons:	BRIAN E STAURSETH; FAIRBANKS, 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:pubin@ntsb.gov">pubin@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.