



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	McGrath, AK	<b>Accident Number:</b>	ANC07LA040
<b>Date &amp; Time:</b>	05/30/2007, 1200 AKD	<b>Registration:</b>	N898AT
<b>Aircraft:</b>	Douglas DC-4	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 125: 20+ Pax,6000+ lbs		

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## Analysis

The captain was making a VFR landing approach to a remote mining airstrip in a modified Douglas DC-4 airplane at the end of a cross-country nonscheduled cargo flight. The modified airplane had a raised cockpit above the fuselage to accommodate an upward swinging nose door. During the landing flare/touchdown, the airplane undershot the runway threshold, and right main landing gear struck the lip of the runway. The right main landing gear was torn off, which allowed the nose and right wing to collide with the runway surface. The right wing was torn off the fuselage and caught fire. The fuselage, containing the cargo of fuel bladders, slid to a stop and rolled about 90 degrees to the left. The pilot indicated that due to the additional cockpit height of the modified airplane, versus a standard Douglas DC-4 airplane, the airplane was lower than he perceived.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: An undershoot and collision with the runway when the pilot misjudged the distance/altitude during the landing flare/touchdown.

## Findings

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Occurrence #1: UNDERSHOOT

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) DISTANCE/ALTITUDE - MISJUDGED - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. TERRAIN CONDITION - RUNWAY

## Factual Information

On May 30, 2007, about 1200 Alaska daylight time, a wheel-equipped Douglas DC-4 airplane, modified as a Carvair ATL-98, N898AT, sustained substantial damage when it collided with the approach end of a remote mine site runway during the landing flare/touchdown, about 28 miles northeast of McGrath, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country nonscheduled cargo flight under Title 14, CFR Part 125, when the accident occurred. The airplane was operated by Brooks Air Transport, dba Brooks Fuel Inc., Fairbanks, Alaska. The captain, an airline transport certificated pilot, and the first officer, a commercial certificated pilot, were not injured. Visual meteorological conditions prevailed, and VFR company flight following procedures were in effect. The flight originated at the Fairbanks International Airport about 1030.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on May 30, the captain reported that he was planning to land on runway 16, at the Nixon Fork Mine airport. The gravel surface runway, about 1,510 feet msl, is about 4,200 feet long. The captain said that the airplane became low on the landing approach, the right wing dropped, and the right main landing gear struck the lip of the runway. The right main landing gear was torn off, which allowed the nose and right wing to collide with the runway surface. The right wing was torn off the fuselage and caught fire. The fuselage, containing the cargo of fuel bladders, slid to a stop and rolled about 90 degrees to the left. The right wing continued to burn for about 1.5 hours.

The Carvair ATL-98 airplane has a raised cockpit area, above the fuselage, to allow for the installation and operation of an upward swinging nose door.

The Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1) submitted by the pilot, contains a recommendation (How could this accident have been prevented?) section. The pilot indicated that the sight picture in the Carvair is higher than the DC-4, and said, "I think I was lower than I perceived."

## Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor	<b>Age:</b>	61, 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
<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>	
<b>Medical Certification:</b>	Class 2 With Waivers/Limitations	<b>Last Medical Exam:</b>	03/01/2007
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	05/01/2006
<b>Flight Time:</b>	21658 hours (Total, all aircraft), 13600 hours (Total, this make and model), 21000 hours (Pilot In Command, all aircraft), 158 hours (Last 90 days, all aircraft), 75 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Co-Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	30, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Rear
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<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>	
<b>Medical Certification:</b>	Class 1 With Waivers/Limitations	<b>Last Medical Exam:</b>	12/01/2006
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	10/01/2006
<b>Flight Time:</b>	1086 hours (Total, all aircraft), 399 hours (Total, this make and model), 571 hours (Pilot In Command, all aircraft), 195 hours (Last 90 days, all aircraft), 49 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Douglas	<b>Registration:</b>	N898AT
<b>Model/Series:</b>	DC-4	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	42994
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	05/01/2007, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	71000 lbs
<b>Time Since Last Inspection:</b>	2 Hours	<b>Engines:</b>	4 Reciprocating
<b>Airframe Total Time:</b>	55753 Hours	<b>Engine Manufacturer:</b>	Pratt & Whitney
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	R-2000
<b>Registered Owner:</b>	Brooks Air Transport	<b>Rated Power:</b>	1450 hp
<b>Operator:</b>	Brooks Air Transport	<b>Air Carrier Operating Certificate:</b>	None
<b>Operator Does Business As:</b>	Brooks Fuel Inc.	<b>Operator Designator Code:</b>	B20B

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Observation Time:	
Distance from Accident Site:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	10° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	5 knots/ 10 knots, 80°	Visibility (RVR):	
Altimeter Setting:	29.6 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Fairbanks, AK (PAFA)	Type of Flight Plan Filed:	Company VFR
Destination:	McGrath, AK (AK40)	Type of Clearance:	None
Departure Time:	1030 ADT	Type of Airspace:	

## Airport Information

Airport:	Nixon Fork Mine (AK40)	Runway Surface Type:	Dirt; Gravel
Airport Elevation:	1510 ft	Runway Surface Condition:	Dry
Runway Used:	16	IFR Approach:	None
Runway Length/Width:	4200 ft	VFR Approach/Landing:	Full Stop

## Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	63.229167, -154.760278

## Administrative Information

Investigator In Charge (IIC):	Scott Erickson	Adopted Date:	12/20/2007
Additional Participating Persons:	Boyd Waltman; FAA-AL-ANC FSDO 03; 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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