



National Transportation Safety Board Aviation Accident Final Report

Location:	McGrath, AK	Accident Number:	ANC07LA095
Date & Time:	09/01/2007, 1230 AKD	Registration:	N2088Z
Aircraft:	Short Bros. SC-7	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

The airline transport pilot was landing a twin-engine turboprop airplane at a remote lodge airstrip, which was about 1,000 feet long, and about 40 feet wide. During the landing roll, the nose landing gear strut collapsed when it encountered soft terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's selection of unsuitable terrain for landing and subsequent nose gear collapse during the landing roll. Contributing to the accident was the soft terrain.

Findings

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

Findings

1. (F) TERRAIN CONDITION - SOFT
 2. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - SELECTED - PILOT IN COMMAND
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Occurrence #2: NOSE GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings

3. (C) LANDING GEAR, NOSE GEAR ASSEMBLY - OVERLOAD

Factual Information

On September 1, 2007, about 1230 Alaska daylight time, a twin-engine turboprop Short Brothers SC-7 airplane, N2088Z, sustained substantial damage when the nose landing gear strut collapsed during the landing roll at a remote lodge airstrip, about 82 miles east-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 135, when the accident occurred. The airplane was operated by Arctic Circle Air Service Inc., Fairbanks, Alaska. The airline transport certificated pilot, the sole occupant, was not injured. The flight originated at the Fairbanks International Airport about 1030. Visual meteorological conditions prevailed, and a VFR flight plan was filed.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on September 4, the director of operations for the operator reported that the pilot was landing toward the northwest at the Mystic Lake Lodge. The gravel surfaced runway was about 1,000 feet long, and about 40 feet wide. During the landing roll, the nose landing gear strut collapsed when it encountered soft terrain.

On September 10, the director of maintenance for the operator reported that the fuselage received structural damage aft of the nose gear when the nose gear collapsed.

Pilot Information

Certificate:	Airline Transport	Age:	45, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without Waivers/Limitations	Last FAA Medical Exam:	04/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	08/01/2007
Flight Time:	15000 hours (Total, all aircraft), 2600 hours (Total, this make and model), 15000 hours (Pilot In Command, all aircraft), 260 hours (Last 90 days, all aircraft), 89 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Short Bros.	Registration:	N2088Z
Model/Series:	SC-7	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	SH-1963
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	08/01/2007, AAIP	Certified Max Gross Wt.:	12500 lbs
Time Since Last Inspection:	114 Hours	Engines:	2 Turbo Prop
Airframe Total Time:	10730 Hours as of last inspection	Engine Manufacturer:	Garrett
ELT:		Engine Model/Series:	TPE331-2-201A
Registered Owner:	Arctic Air Group	Rated Power:	715 hp
Operator:	Arctic Circle Air Service Inc.	Operating Certificate(s) Held:	Commuter Air Carrier (135); On-demand Air Taxi (135)
Operator Does Business As:	Arctic Circle air	Operator Designator Code:	ACSA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 5000 ft agl	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	Light and Variable /	Turbulence Type Forecast/Actual:	/
Wind Direction:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fairbanks, AK (PAFA)	Type of Flight Plan Filed:	VFR
Destination:	McGrath, AK	Type of Clearance:	None
Departure Time:	1030 ADT	Type of Airspace:	

Airport Information

Airport:	Mystic Lake Lodge	Runway Surface Type:	Dirt; Grass/turf; Gravel
Airport Elevation:	1750 ft	Runway Surface Condition:	Dry; Rough; Soft
Runway Used:		IFR Approach:	None
Runway Length/Width:	1000 ft / 40 ft	VFR Approach/Landing:	Full Stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	62.858333, -152.626667

Administrative Information

Investigator In Charge (IIC):	Scott Erickson	Report Date:	05/28/2008
Additional Participating Persons:	Terry Musick; 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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.ntsbt.gov/pubdms/ .		

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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](#).