



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	DENVER, CO	<b>Accident Number:</b>	DEN99LA047A
<b>Date &amp; Time:</b>	03/05/1999, 0603 MST	<b>Registration:</b>	N151SA
<b>Aircraft:</b>	Swearingen SA226TC	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

N328BA was partially deiced at the ramp when they ran out of deicing fluid. The pilot asked the ramp crew to meet him at the deicing pad on the south end of the airport to finish deicing the aircraft. The pilot received taxi clearance and instructions to hold short on the taxiway, and to contact ground control. Prior to reaching the taxiway hold short lines, he received clearance to taxiway to the runway. He then realized he had forgotten to advise ramp control that he needed to deice the aircraft. According to the pilot of N328BA, at that time, he looked up and noticed that N151SA was stopped in front of him. N328BA then impacted N151SA, striking the tail section of N151SA, causing substantial damage to the left side of the fuselage extending from the cargo door aft. The pilot of N328BA stated in a telephone interview that while taxiing, he performed a brake test and observed no discrepancies. Immediately following the accident, a brake test was performed in the presence of the IIC and two FAA inspectors. The brakes were found to be operational. Toxicological examinations were performed on both pilots and the results were negative.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot of N328BA's failure to maintain visual lookout while taxiing, causing the subsequent collision with N151SA.

## Findings

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Occurrence #1: COLLISION BETWEEN AIRCRAFT (OTHER THAN MIDAIR)  
Phase of Operation: STANDING - ENGINE(S) OPERATING

### Findings

1. (C) VISUAL LOOKOUT - NOT MAINTAINED - PILOT OF OTHER AIRCRAFT
2. LIGHT CONDITION - DAWN

## Factual Information

On March 5, 1999, at 0603 mountain standard time, a Swearingen SA226TC, N151SA, operating as Superior Aviation (HKA) flight 1828, and another Swearingen SA226TC, N328BA, operating as HKA flight 1810, both owned and operated by Superior Aviation Inc., of Iron Mountain, Michigan, collided while taxiing at Denver International Airport, Denver, Colorado. The airline transport rated pilot of N151SA and the commercial pilot of N328BA were not injured. Both aircraft were being operated as non-scheduled domestic cargo flights under Title 14 CFR Part 135, and visual meteorological conditions prevailed. IFR flight plans were filed for N151SA to Cheyenne, Wyoming, and N328BA to Rifle, Colorado.

According to the pilot of N328BA, the aircraft's wings and tail section were partially deiced at the ramp by ramp personnel before they ran out of deicing fluid. He received taxi clearance from ramp control and asked the deicing crew to meet him on the south end of taxiway A to finish deicing the remainder of the aircraft. He received instructions to hold short on taxiway A, and to contact ground control. Prior to reaching the taxiway hold short lines, he contacted ground control and received a clearance to taxiway to runway 17R via taxiway M. He stated that because he received clearance to taxi to the runway, he did plan on stopping at the hold short lines.

Immediately after receiving his taxi clearance, he realized he had forgotten to advise ramp control that he needed to deice the aircraft. At that time, he looked up and noticed that N151SA had stopped in front of him. He stated that he applied brake pressure, but was unable to stop. Upon impact, the left propeller of N328BA struck the tail section of N151SA, causing substantial damage to the left side of the fuselage of N151SA extending from the cargo door aft. In addition, the right flap of N151SA was damaged by N328BA's nose section. N328BA received minor damage to the left propeller, the left forward side of the fuselage, and the nose wheel well.

According to the pilot of N151SA, while parked at the gate prior to taxiing, he contacted ramp control for taxi instructions. He was instructed to taxi to runway 8 via taxiway SC to taxiway A, to hold short of the taxiway hold short lines, and then to contact ground control. Upon reaching the hold short lines, he contacted ground control and was advised to continue holding, then to follow a Cessna 404 in front of him to runway 8 via taxiway M. He taxied across the hold short lines, and stopped behind the Cessna. While at a complete stop, he felt the airplane being "violently shaken" for a short time. He verified that both engines were operating, then shut down the aircraft and notified ground control of the accident.

The pilot of N328BA stated in a telephone interview with the Investigator-In-Charge (IIC) that while taxiing, he performed a brake test and observed no discrepancies. The pilot stated in an interview with an FAA inspector following the accident that when he applied the brakes prior to impacting N151SA, he felt pressure and the aircraft slowed down, but "did not stop normally." Immediately following the accident, a brake test was performed in the presence of the IIC and two FAA inspectors. A tug was connected to N328BA, with the assistance of ramp personnel seated in both the aircraft and the tug. The tug operator attempted to pull the aircraft forward, while the aircraft operator applied brake pressure. The aircraft's brakes held the aircraft in place and were found to be operational.

Toxicological examinations were performed on the pilots of N151SA and N328BA immediately following the accident. The examination results on both pilots were negative.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor; Commercial	<b>Age:</b>	27, 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>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last Medical Exam:</b>	07/02/1998
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2806 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Swearingen	<b>Registration:</b>	N151SA
<b>Model/Series:</b>	SA226TC SA226TC	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	TC302
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	03/04/1999, AAIP	<b>Certified Max Gross Wt.:</b>	10062 lbs
<b>Time Since Last Inspection:</b>	0 Hours	<b>Engines:</b>	2 Turbo Prop
<b>Airframe Total Time:</b>	29876 Hours	<b>Engine Manufacturer:</b>	Garrett
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	TPE331
<b>Registered Owner:</b>	SUPERIOR AVIATION INC.	<b>Rated Power:</b>	904 hp
<b>Operator:</b>	SUPERIOR AVIATION INC.	<b>Air Carrier Operating Certificate:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	EATA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dawn
Observation Facility, Elevation:	DEN, 5431 ft msl	Observation Time:	0553 MST
Distance from Accident Site:	2 Nautical Miles	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 18000 ft agl	Temperature/Dew Point:	-7° C / -8° C
Lowest Ceiling:	None / 0 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	6 knots, 160°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	CHEYENNE, WY (CYS)	Type of Clearance:	IFR
Departure Time:	0000	Type of Airspace:	Class B

## Airport Information

Airport:	DENVER INTERNATIONAL (DEN)	Runway Surface Type:	
Airport Elevation:	5431 ft	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

## 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:	

## Administrative Information

Investigator In Charge (IIC):	B. BEACH SCOTT	Adopted Date:	04/25/2001
Additional Participating Persons:	STEVEN R SCULLY; DENVER, CO		
Publish Date:			
Investigation Docket:	NTSB accident and incident docket 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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