



# National Transportation Safety Board Aviation Accident Final Report

---

<b>Location:</b>	Denver, CO	<b>Accident Number:</b>	DEN04FA027A
<b>Date &amp; Time:</b>	12/03/2003, 0555 MST	<b>Registration:</b>	N60U
<b>Aircraft:</b>	Swearingen SA226-TC	<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		

---

## Analysis

The accident involved 2 Swearingen airplanes. The pilot of the first airplane reported that he had taxied north for departure. There were several company aircraft in front of him in line for departure so he came to a complete stop. The pilot of the second airplane reported that he was also taxiing north for departure. He had seen the lights from an aircraft holding short of runway 17R; however, he did not see the lights of the first airplane until it was too late. The pilot of the second airplane reported he applied full brakes and used reverse thrust but was unable to avoid hitting the first airplane. Both airplanes were substantially damaged.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of the pilot of the taxiing aircraft to maintain clearance and adequate visual lookout for the stopped aircraft.

## Findings

---

Occurrence #1: COLLISION BETWEEN AIRCRAFT (OTHER THAN MIDAIR)  
Phase of Operation: TAXI - TO TAKEOFF

### Findings

1. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
2. (F) LIGHT CONDITION - DARK NIGHT
3. (C) VISUAL LOOKOUT - NOT MAINTAINED - PILOT IN COMMAND

## Factual Information

On December 3, 2003, at approximately 0555 mountain standard time, a Swearingen SA227-AC, N340AE, and a Swearingen SA226-TC, N60U, both operated by Key Lime, Inc., were substantially damaged when they collided during night taxi at Denver International Airport, Denver, Colorado. Neither the airline transport pilot in N60U, nor the commercial pilot in N340AE, were injured. Night visual meteorological conditions prevailed. Instrument flight rules (IFR) flight plans had been filed for the non-scheduled domestic cargo flights being operated under the provisions of Title 14 CFR Part 135. Both flights were originating at the time of the accident.

The pilot of N340AE reported that he had taxied north on taxiway Mike (M) to the "M10" intersection. There were several company aircraft in front of him in line for runway 17R. He came to a complete stop behind a Cessna 404, remaining partially on the M taxiway.

The pilot of N60U reported that he was taxiing north on the M taxiway, en route to runway 8 for departure. He had seen the lights from an aircraft holding short of runway 17R; however, he did not see the lights of N340AE until it was too late. The pilot of N60U reported he applied full brakes and used reverse thrust but was unable to avoid hitting N340AE.

Both airplanes were examined at the scene. N340AE, was turned to the right during the collision, entangling its empennage with N60U's empennage. The outer 8 feet of N60U's right wing was severed. The outboard 2 feet of the right propeller's blades showed chordwise scratches, torsional bends, and leading edge gouges and chips. The airplane's empennage was crushed and bent.

The bottom empennage of N340AE was scraped and torn. The airplane's left wing tip was bent upward, and showed skin wrinkles. An 8-foot long, 2-foot wide section of the left outboard wing's trailing edge was torn out. The airplane's empennage was crushed and bent.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	49, 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>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last Medical Exam:</b>	10/20/2003
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	07/08/2003
<b>Flight Time:</b>	13285 hours (Total, all aircraft), 168 hours (Last 90 days, all aircraft), 37 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Swearingen	Registration:	N60U
Model/Series:	SA226-TC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	TC-323
Landing Gear Type:	Retractable - Tricycle	Seats:	3
Date/Type of Last Inspection:	11/23/2003, Continuous Airworthiness	Certified Max Gross Wt.:	12500 lbs
Time Since Last Inspection:	10 Hours	Engines:	2 Turbo Prop
Airframe Total Time:	25932 Hours	Engine Manufacturer:	Aero Engines
ELT:	Installed, not activated	Engine Model/Series:	TPE-331
Registered Owner:	E.D.B. Air Inc.	Rated Power:	840 hp
Operator:	Key Lime	Air Carrier Operating Certificate:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	KY7A

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night
Observation Facility, Elevation:	DEN, 5431 ft msl	Observation Time:	0553 MST
Distance from Accident Site:	1 Nautical Miles	Direction from Accident Site:	90°
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	-6° C / -8° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	12 knots, 170°	Visibility (RVR):	
Altimeter Setting:	30.16 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Denver, CO (DEN)	Type of Flight Plan Filed:	IFR
Destination:	Garden City, KS (GCK)	Type of Clearance:	IFR
Departure Time:	0550 MST	Type of Airspace:	Class B

## Airport Information

Airport:	Denver International Airport (DEN)	Runway Surface Type:	Unknown
Airport Elevation:	5431 ft	Runway Surface Condition:	Unknown
Runway Used:	NA	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	39.861389, -104.661389

## Administrative Information

<b>Investigator In Charge (IIC):</b>	James Struhsaker	<b>Adopted Date:</b>	06/30/2004
<b>Additional Participating Persons:</b>	Jim B Hopkins; FAA FSDO; Denver, CO		
<b>Publish Date:</b>			
<b>Investigation Docket:</b>	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.ntsbt.gov/pubdms/">http://dms.ntsbt.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.