



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Casper, Wyoming	Incident Number:	DEN06IA042
Date & Time:	February 20, 2006, 18:45 Local	Registration:	N235BA
Aircraft:	Swearingen SA226TC	Aircraft Damage:	Minor
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

The pilot set engine power to 60 percent rpm for takeoff, released the brakes, and the airplane steered straight ahead. At approximately 800 feet down the runway, the airplane veered to the right. The pilot said he applied full left steering (tiller) and full left rudder, but the airplane continued to veer right. The pilot said he then used full reverse propeller to arrest the forward motion. The airplane went off the right edge of the runway and stopped approximately 1,300 feet from the start of the takeoff roll. A preliminary examination of the airplane showed the nose wheel was turned beyond the right turn limit mark. The left propeller sustained damage to all 4 blade tips. The weather at the time of the incident was clear skies, 10 miles visibility, temperature 18 degrees Fahrenheit (F), dew point 7 degrees F, and altimeter 29.87 inches. Further examination of the nose wheel steering system failed to show why the airplane initiated the uncontrolled turn. All other systems showed no anomalies.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: loss of directional control for undetermined reasons. A factor contributing to the incident was the runway maker light.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. LANDING GEAR,STEERING SYSTEM

Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: TAKEOFF

Findings

2. DIRECTIONAL CONTROL - NOT POSSIBLE

3. ABORT - PERFORMED - PILOT IN COMMAND

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - ABORTED

Findings

4. (F) OBJECT - RUNWAY LIGHT

Factual Information

On February 20, 2006, approximately 1845 mountain standard time, a Swearingen SA226TC, N235BA, piloted by a commercial pilot and operating as Spendair Flight 1713, sustained minor damage when the airplane's left propeller struck a runway marker light, following a loss of directional control during takeoff from the Natrona County International Airport (CPR), Casper, Wyoming. Night visual meteorological conditions prevailed at the time of the incident. The non-scheduled, domestic passenger flight was operating on an instrument flight rules flight plan from CPR to Denver, Colorado, under the provisions of Title 14 CFR Part 121. The pilot and two passengers on board were not injured. The flight was originating at the time of the incident.

According to the pilot, he had set engine power to 60 percent rpm for takeoff, released the brakes, and the airplane steered straight ahead. At approximately 800 feet down runway 21 (10,600 feet by 150 feet, dry asphalt), the airplane veered to the right. The pilot said he applied full left steering (tiller) and full left rudder, but the airplane continued to veer right. The pilot said he then used full reverse propeller to arrest the forward motion. The airplane went off the right edge of runway 21 and stopped approximately 1,300 feet from the start of the takeoff roll.

A preliminary examination of the airplane showed the nose wheel was turned beyond the right turn limit mark. The left propeller sustained damage to all 4 blade tips.

At 1853, the Aviation routine Weather Report at CPR was clear skies, 10 miles visibility, temperature 18 degrees Fahrenheit (F), dew point 7 degrees F, and altimeter 29.87 inches.

Further examination of the nose wheel steering system failed to show why the airplane initiated the uncontrolled turn. All other systems showed no anomalies.

Pilot Information

Certificate:	Commercial	Age:	56,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	December 1, 2005
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	5800 hours (Total, all aircraft), 3700 hours (Total, this make and model), 5770 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Swearingen	Registration:	N235BA
Model/Series:	SA226TC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	TC235
Landing Gear Type:	Retractable - Tricycle	Seats:	3
Date/Type of Last Inspection:	February 1, 2006 Continuous airworthiness	Certified Max Gross Wt.:	12500 lbs
Time Since Last Inspection:		Engines:	2 Turbo prop
Airframe Total Time:	29261.5 Hrs at time of accident	Engine Manufacturer:	Garrett
ELT:	Installed, not activated	Engine Model/Series:	TPE331
Registered Owner:	Superior Aviation, Inc.	Rated Power:	1000 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:	Spendair	Operator Designator Code:	EATA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	CPR,5348 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	18:53 Local	Direction from Accident Site:	120°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	19 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.87 inches Hg	Temperature/Dew Point:	-8°C / -14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Casper, WY (CPR)	Type of Flight Plan Filed:	IFR
Destination:	Denver, CO (DEN)	Type of Clearance:	IFR
Departure Time:	18:45 Local	Type of Airspace:	

Airport Information

Airport:	Natrona County International CPR	Runway Surface Type:	Asphalt
Airport Elevation:	5348 ft msl	Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	Unknown
Runway Length/Width:	10600 ft / 150 ft	VFR Approach/Landing:	Unknown

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Minor
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	42.904998,-106.457778

Administrative Information

Investigator In Charge (IIC):	Bowling, David
Additional Participating Persons:	Bruce Hanson; Federal Aviation Administration; Casper, WY
Original Publish Date:	August 29, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=63259

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).