



# Aviation Investigation Final Report

<b>Location:</b>	STUART, Florida	<b>Accident Number:</b>	MIA99LA096
<b>Date &amp; Time:</b>	February 28, 1999, 18:45 Local	<b>Registration:</b>	N2313Z
<b>Aircraft:</b>	Piper PA-23-250	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	4 None
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled		

## Analysis

The pilot was advised that the wind at an airport near his destination airport was 250 degrees at 15 knots. The first leg of the flight was turbulent but that flight and the next 2 flights were uneventful. During the final leg, the pilot contacted the Air Traffic Control Tower and was advised that the wind was from 250 degrees at 18 knots with gusts to 25 knots. The pilot reported that during the flare to land, the nose pitched up then the airplane landed first on the nose landing gear. The airplane then bounced and the pilot performed a go-around. The flight returned for landing, and the airplane was landed in a three point attitude. During the landing roll, the pilot heard a sound from the nose landing gear and noted that the nose landing gear tire was flat. The airplane was secured on the runway. Examination of the airplane by an FAA Airworthiness Inspector revealed that the left main wing spar was damaged, the top skin of the nose section was wrinkled, the balance weight for the nose landing gear tire was separated, and fuselage damage near the pilot's window was noted.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The inadequate touchdown resulting in a hard landing on the nose landing gear and subsequent structural damage.

## Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. WEATHER CONDITION - GUSTS

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Occurrence #2: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. (C) TOUCHDOWN - INADEQUATE - PILOT IN COMMAND

## Factual Information

On February 28, 1999, about 1845 eastern standard time, a Piper PA-23-250, N2313Z, registered to Stuart Jet Center, Inc., experienced a hard landing at the Witham Field Airport, Stuart, Florida. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 135, nonscheduled, domestic, passenger flight. The airplane was substantially damaged and the commercial-rated pilot and three passengers were not injured. The flight originated about 1815 from the St. Lucie County International Airport, Fort Pierce, Florida.

The pilot stated that while driving to the airport, he called the Miami Automated Flight Service Station to "check on weather" and to file Defense Visual Flight Rules (DVFR) flight plans for the departure and arrival flights from and to the U.S., respectively. He was advised that the weather condition from the airport closest to his destination airport in the Bahamas indicated that the wind was from 250 degrees at 15 knots. The flight departed on the first leg to Freeport, Bahamas, and as reported by the pilot, it was windy and turbulent but uneventful. The flight cleared customs then departed on the second leg which was also uneventful to pick up the passengers. The passengers were loaded and the flight departed arriving uneventfully in Fort Pierce, Florida, where the flight cleared customs, then departed for the final flight.

Review of a certified copy of the communications tape and a transcription of communications revealed that at 1827.18, the pilot contacted the Air Traffic Control Tower (ATCT), and advised that the flight was 15 miles to the north, inbound for a full stop landing. The controller advised the pilot that the wind was from 250 degrees at 18 knots with gusts to 25 knots. The pilot acknowledged that transmission and at 1832.53, the controller cleared the flight to land and advised the pilot that the wind was from 250 degrees gusting to 25 knots. At 1835.08 and 1835.32, the tower controller broadcast on the tower frequency that the wind was from 240 degrees at 24 knots and 250 degrees at 15 knots, respectively. The pilot later reported that while on final approach, there was light to moderate turbulence and that he was not aware that earlier, there was windshear in the area. While on final approach with the flaps fully extended, the flight condition was "pretty bumpy" but not uncomfortable. The flight continued and during final approach, he was able to maintain his airspeed, but during the flare about 3-5 feet above the runway, the nose of the airplane pitched up. The pilot corrected but the airplane then touched down first on the nose landing gear and bounced, remaining in a nose high attitude. At 1836.13, the pilot advised the controller that the flight was "gonna go around." The controller acknowledged this then cleared the flight to land again on runway 25. The pilot requested that he perform a low pass by the tower and the controller advised the pilot that all gears appeared to be down and locked. The flight was cleared again to land on runway 25. The flight returned for landing and again with the flaps fully extended, the airplane was landed on all three landing gears. About 600-800 feet into the landing roll, a sound was heard from the nose landing gear. The pilot confirmed in the inspection mirror that the nose landing

gear tire was flat and secured the airplane on the runway. The airplane was later removed from the runway and examined by an FAA airworthiness inspector.

Examination of the airplane revealed damage to the left wing main spar, entry door frame, a wrinkle in skin beneath the pilots window, and the nose landing gear tire balance weight was noted to be separated. Damage to the structure in the avionics bay was noted, and the copilot seat back lock was broken.

According to Martin J. Heischberg, the tower controller at the St. Lucie County International Airport who was in contact with the accident pilot during the flight, the wind at the time of the occurrence was variable from 230 to 270 degrees at 17 knots with gusts to 30 knots. Additionally, there were no reports of windshear in the previous 1.5 hours before the accident.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	36, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	January 14, 1999
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2625 hours (Total, all aircraft), 62 hours (Total, this make and model), 1664 hours (Pilot In Command, all aircraft), 76 hours (Last 90 days, all aircraft), 32 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N2313Z
<b>Model/Series:</b>	PA-23-250 PA-23-250	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	27-8054013
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	February 25, 1999 100 hour	<b>Certified Max Gross Wt.:</b>	5200 lbs
<b>Time Since Last Inspection:</b>	2 Hrs	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	2514 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-540
<b>Registered Owner:</b>	STUART JET CENTER, INC.	<b>Rated Power:</b>	250 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	On-demand air taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Dusk
<b>Observation Facility, Elevation:</b>	FPR ,23 ft msl	<b>Distance from Accident Site:</b>	20 Nautical Miles
<b>Observation Time:</b>	18:48 Local	<b>Direction from Accident Site:</b>	342°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	260°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	FORT PIERCE , FL (FPR )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(SUA )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:15 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	WITHAM FIELD AIRPORT SUA	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	18 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	25	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>	4652 ft / 100 ft	<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	3 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	4 None	<b>Latitude, Longitude:</b>	27.18997,-80.190017(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Monville, Timothy
<b>Additional Participating Persons:</b>	RICH ENGLER; FORT LAUDERDALE, FL STEVE CARL; FORT LAUDERDALE, FL
<b>Original Publish Date:</b>	June 23, 2000
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=45833">https://data.ntsb.gov/Docket?ProjectID=45833</a>

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