
Hard landing, Boeing 747-269B, March 22, 1997

Micro-summary: This Boeing 747-269B experienced a hard landing during difficult lighting conditions.


Event Date: 1997-03-22 at 644 AST


Investigative Body: National Transportation Safety Board (NTSB), USA


Investigative Body's Web Site: <http://www.nts.gov/>

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1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
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		NTSB ID: CHI97IA096		Aircraft Registration Number: N707CK	
		Occurrence Date: 03/22/1997		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place MANAUS	State	Zip Code	Local Time 0644	Time Zone AST	
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 747-269B		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On March 22, 1997, at 0644 atlantic standard time, a Boeing 747-269B, N707CK, owned and operated by American International Airways, Inc., sustained minor damage during a hard landing at Manaus, Brazil. Flight 903 was a cargo flight which departed Miami, Florida, at 0152. There were no injuries reported by the crew of seven. Visual meteorological conditions prevailed at the time of the incident. The flight was operating under provisions of 14 CFR Part 121 and an IFR flight plan was on file. The pilot reported glare from landing into the sun resulted in a hard landing.</p> <p>Both of the pilots held Captain ratings with the airline. Prior to commencing the flight they determined between themselves who would act as the pilot-in-command and who would act as the second pilot for this flight. Because they both held the status of Captain either could operate the airplane from the left seat. They decided that the pilot-in-command would occupy the right seat and act as the non-flying pilot while the second pilot would occupy the left seat and act as the flying pilot.</p> <p>During interviews and written statements, they said the landing was into the early morning sun approximately 30 minutes after local sunrise. They reported that the glare from the sun was intense and the flying pilot installed his windshield sun shade at the other marker. They said that the 1,000 foot and 500 foot call outs were made with confirmation of the runway in sight. The flying pilot continued to fly on instruments to decision height. They said that at approximately 1,000 feet the glare increased with low haze and the forward visibility decreased. In their written statement they said that the flying pilot considered the airplane to be in the correct attitude for landing; however, the non-flying (PIC) took control prior to touchdown and flared the airplane when he saw no apparent flare. The airplane then touched down hard.</p> <p>An inspection of the airplane after the hard landing found wrinkles in the fuselage. The airplane was ferried back to the maintenance base in Michigan, where it was subjected for further inspection. It was determined that the damage was minor.</p> <p>The "Flight Data Recorder" was removed and the data analyzed by the NTSB's Office of Research and Engineering. A copy of the Factual Report is attached as an addendum to this report. The report confirms a hard landing at Manaus, Brazil, where the touchdown produced 2.77 "G." The data indicated that the sink rate increased when the non-flying pilot moved the control column aft in an attempt to flare the airplane.</p>					
FACTUAL REPORT - AVIATION					
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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CHI97IA096			
		Occurrence Date: 03/22/1997			
		Occurrence Type: Incident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
EDUARDO GOMEZ AIRPORT	SBEG	Ft. MSL	10		
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach: ILS-complete					
VFR Approach/Landing: None					
Aircraft Information					
Aircraft Manufacturer		Model/Series		Serial Number	
Boeing		747-269B		21541	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 8	Certified Max Gross Wt.	800000 LBS	Number of Engines: 4	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Turbo Fan	P&W	JT9D-7J	48650 LBS		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
Continuous Airworthiness	03/1997	106 Hours	53947 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner		Street Address			
AMERICAN INTERNATIONAL AIRWAYS		2701 I-94 SERVICE DRIVE			
		City	State	Zip Code	
		YPSILANTI	MI	48198	
Operator of Aircraft		Street Address			
Same as Reg'd Aircraft Owner		Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As: AIA			Operator Designator Code: CKSA		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s): Flag Carrier/Domestic					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 121: Air Carrier					
Type of Flight Operation Conducted: Non-scheduled; International; Cargo					
FACTUAL REPORT - AVIATION					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: CHI97IA096
	Occurrence Date: 03/22/1997
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 57
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Sex: M	Seat Occupied: Right	Principal Profession: Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport

Airplane Rating(s): Multi-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): None

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review?
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Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 01/1997
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	21596	870	5176	21383		4802				
Pilot In Command(PIC)	17545									
Instructor										
Last 90 Days	94	94								
Last 30 Days	22	22								
Last 24 Hours	5	5								

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point MIAMI	State FL	Airport Identifier MIA	Departure Time 0152	Time Zone EST
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Destination Same as Accident/Incident Location	State	Airport Identifier SBEG	
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Type of Clearance: IFR

Type of Airspace: Class D

Weather Information

Source of Briefing:
Company

Method of Briefing:

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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
0000			0 Ft. MSL	0 NM	0 Deg. Mag.

Sky/Lowest Cloud Condition: Unknown	0 Ft. AGL	Condition of Light: Dawn
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Lowest Ceiling: Overcast	4400 Ft. AGL	Visibility: 3	SM	Altimeter: 29.00	"Hg
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Temperature: 29 °C	Dew Point: 27 °C	Wind Direction:	Density Altitude: Ft.
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Wind Speed: Calm	Gusts:	Weather Conditions at Accident Site: Visual Conditions
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Visibility (RVR): 0 Ft.	Visibility (RVV) 0	SM	Intensity of Precipitation: Unknown
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Restrictions to Visibility: Haze

Type of Precipitation: None

Accident Information

Aircraft Damage: Minor	Aircraft Fire: None	Aircraft Explosion: None
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Classification: U.S. Registered/Foreign Soil

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer				1	1
Cabin Attendants					
Other Crew				4	4
Passengers					
- TOTAL ABOARD -				7	7
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	7	7

National Transportation Safety Board

FACTUAL REPORT
AVIATION



NTSB ID: CHI97IA096

Occurrence Date: 03/22/1997

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

STEPHEN A. WILSON

Additional Persons Participating in This Accident/Incident Investigation:

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