
Wingtip strike, Boeing 747-212B, December 10, 1995

Micro-summary: During approach, the right wing of this Boeing 747-212B collided with the ground.


Event Date: 1995-12-10 at 945 GMT

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

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

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		NTSB ID: MIA96IA039		Aircraft Registration Number: N616FF	
		Occurrence Date: 12/10/1995		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place AMSTERDAM	State	Zip Code 00000	Local Time 0945	Time Zone GMT	
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 747-212B		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 December 10, 1995, about 0945 Universal Time Coordinated [UTC], N616FF, a Boeing 747-212B, operated by Tower Air, Inc., as flight No. 069, a 14 CFR Part 121 scheduled international passenger flight, from Bombay, India, to Amsterdam, Netherlands, dragged the right wing tip and the No. 4 engine nacelle during a missed approach on runway 19R at Schiphol Airport, Amsterdam, Netherlands. Instrument meteorological conditions prevailed at the time and an instrument flight rules flight plan was filed. The airplane sustained minor damage, and the airline transport-rated captain, first officer, flight engineer, 1 extra crew, 14 flight attendants and 288 passengers reported no injuries. The flight had originated from Bombay, India, the same day about 0045.</p> <p>The flight crew stated the captain was flying the instrument landing system approach (ILS) to runway 19R. Upon reaching the decision height the runway environment was in sight and the approach was continued. During the landing flare, fog rolled in and the crew lost sight of the runway. A missed approach was initiated and the flight received radar vectors for another ILS approach to runway 19R. The second approach and landing was uneventful and the aircraft was parked at the gate. The crew was then notified by ground personnel that the No. 4 engine nacelle and right wing tip had made ground contact. Airport personnel stated they found components from the No. 4 engine nacelle on the right side of runway 19R, about 1400 meters from the runway threshold. No scrape marks were located on the runway surface.</p> <p>Transcripts of communications between air traffic controllers and the flight crew of Tower Air flight 69 showed that during the initial approach to runway 19R, at 0932:23, for the first attempt at landing, the flight crew reported receiving the most recent Automatic Terminal Information Service (ATIS) information, GOLF. The approach controller also reported that the runway visual range in the touchdown zone of runway 19R was 700 meters. The approach chart for the Category I ILS approach to runway 19R requires a minimum visibility of 550 meters. At 0941:45, the flight was told to contact the control tower. At 0943:25, the local controller cleared the flight to land. At 0945:19, the flight crew reported to the local controller that they were performing a go-around. The flight was then instructed to contact the approach controller.</p> <p>At 0946:04, the flight crew contacted the approach controller and requested another approach. At 0952:17, the approach controller informed the crew that the touch zone visual range was now 450 meters. At 0954:40, the flight was cleared for another approach. At 0955:43, the approach controller reported that the touchdown zone visual range was now 600 meters. The flight was then instructed to contact the control tower. At 0956:52, the flight was cleared to land. At 0959:31, the flight is told to turn left off the runway and contact the ground controller. See attached ATC transcripts.</p> <p>Recorded radar data from the Schiphol ATC Approach Control, showed that Tower Air 069 flew a normal approach to runway 19R. At about 09:44:41, the flight crossed over the approach end of runway 19R. At 09:44:53, the flight was over the runway and starting to veer to the right. At</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: MIA96IA039

Occurrence Date: 12/10/1995


Occurrence Type: Incident


Narrative (Continued)

09:45:17, the aircraft was off to the right side of the runway and starting to climb. See attached recorded radar data.

Readout of the digital flight data recorder (DFDR) showed that 1 second before main landing gear contact with the runway, as recorded by the tilt switch parameter, the control column position and pitch attitude began to increase in the nose-up direction. The main landing gear made runway contact for 2 seconds. As runway contact was made the engine thrust values began a symmetrical increase from a steady value of about 1.3 EPR. One second after main landing gear contact the radio altimeter increased to 7.8 feet, the pitch increased to 11.9 degrees nose up, and the roll increased to 13.2 degrees right wing down. Three seconds after main landing gear contact the radio altimeter passed 30 feet, the roll had increased to 24 degrees right wing down and the pitch attitude had increased to 14 degrees nose up. For the 10-second period from 1 second before main landing gear touchdown to 9 seconds after main landing gear touchdown, the aircraft's heading changed from 178 degrees to 199 degrees. The remaining data was consistent with a go-around and subsequent landing on runway 19R. See attached Flight Data Recorder Group Chairman Factual Report.

The Netherlands Aviation Safety Board has delegated the investigation and responsibility for reporting of this incident to the United States NTSB in accordance with ICAO Annex 13.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: MIA96IA039			
		Occurrence Date: 12/10/1995			
		Occurrence Type: Incident			
Landing Facility/Approach Information					
Airport Name SCHIPHOL	Airport ID: EHAM	Airport Elevation -11 Ft. MSL	Runway Used 19R	Runway Length 10827	Runway Width 148
Runway Surface Type: Asphalt					
Runway Surface Condition: Wet					
Type Instrument Approach: ILS-complete					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer Boeing		Model/Series 747-212B		Serial Number 21939	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 506	Certified Max Gross Wt.	820000 LBS	Number of Engines: 4	
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: JT9D-7Q	Rated Power: 51900 LBS		
- Aircraft Inspection Information					
Type of Last Inspection AAIP	Date of Last Inspection 11/1995	Time Since Last Inspection 245 Hours	Airframe Total Time 61448 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? Yes	ELT Operated? No	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner FIRST SECURITY BANK OF UTAH		Street Address 79 SOUTH MAIN STREET			
		City SAL LAKE CITY	State UT	Zip Code 84111	
Operator of Aircraft TOWER AIR, INC.		Street Address HANGAR 17, JFK INTL AIRPORT			
		City JAMAICA	State NY	Zip Code 11430	
Operator Does Business As:			Operator Designator Code: TWRA		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s): Flag Carrier/Domestic; Supplemental					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 121: Air Carrier					
Type of Flight Operation Conducted: Scheduled; International; Passenger Only					
FACTUAL REPORT - AVIATION					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: MIA96IA039
	Occurrence Date: 12/10/1995
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 44
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Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport

Airplane Rating(s): Multi-engine Land; Single-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--no waivers/lim.	Date of Last Medical Exam: 06/1995
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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	12400	8800		12400	3000					
Pilot In Command(PIC)	6000	6000		6000	2000					
Instructor										
Last 90 Days	244	244		244						
Last 30 Days	87	87		87						
Last 24 Hours	9	9		9						

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 BOMBAY	State OF	Airport Identifier VABB	Departure Time 0024	Time Zone GMT
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Destination Same as Accident/Incident Location	State	Airport Identifier EHAM	
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Type of Clearance: IFR

Type of Airspace: Class B

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
EHA	0955	GMT	0 Ft. MSL	1 NM	190 Deg. Mag.
Sky/Lowest Cloud Condition: Unknown			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Overcast		200 Ft. AGL		Visibility: 0 SM	Altimeter: 30.00 "Hg
Temperature: -2 °C	Dew Point: -2 °C	Wind Direction: 130		Density Altitude: 0 Ft.	
Wind Speed: 5	Gusts:	Weather Conditions at Accident Site: Instrument Conditions			
Visibility (RVR): 1600 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Light			
Restrictions to Visibility: Fog; Ice Fog					
Type of Precipitation: Freezing Rain					

Accident Information		
Aircraft Damage: Minor	Aircraft Fire: None	Aircraft Explosion: None

Classification: U.S. Registered/U.S. 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				14	14
Other Crew				1	1
Passengers				288	288
- TOTAL ABOARD -				306	306
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	306	306

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: MIA96IA039

Occurrence Date: 12/10/1995

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

ANDREW A. ALSTON

Additional Persons Participating in This Accident/Incident Investigation:

ED STROSCHEINE
FAA FSDO
NEW YORK, NY 11581

B A GROENENDIJK
NETHERLANDS AVIATION SAFETY BD
AMSTERDAM, OF 00000