



National Transportation Safety Board Aviation Incident Final Report

Location:	Miami, FL	Incident Number:	MIA02IA047
Date & Time:	01/01/2002, 1057 EST	Registration:	9Y-THQ
Aircraft:	McDonnell Douglas MD-83	Aircraft Damage:	Minor
Defining Event:		Injuries:	125 None
Flight Conducted Under:	Part 129: Foreign		

Analysis

The captain stated the first officer was flying the airplane for the approach and landing. He and the first officer performed a briefing for the localizer 30 approach to Miami International Airport, prior to beginning descent. During landing on runway 30, the airplane floated for a while before touchdown, after the first officer flared for landing. After a few seconds, he, the captain, took control of the airplane during the landing roll. It appeared the airplane would over run the runway and collide with an approach light structure. The captain steered the airplane to the left side of the runway and brought it to a complete stop with the nose wheel in a sandy area. He shutdown the engines and deplaned the passengers. The airplane was then towed to the gate. Readout of the digital flight data recorder showed the decent from cruise flight to 10,000 feet appeared normal and at 10,000 feet the airplane maintained 250 knots airspeed. During descent from 10,000 feet the airspeed began to increase, reaching over 300 knots as the airplane descended through 5,000 feet. An airspeed of over 300 knots was maintained until within 4 miles of the runway and an altitude of 1,500 feet. The airplane crossed over the runway threshold at over 100 feet, as measured by the radio altimeter, and over 200 knots airspeed, at least $V_{ref} + 70$ knots. The touchdown speed was approximately 150 knots. Full wing spoilers or speed brakes were deployed from 4.5 to 2.5 miles remaining to the runway or between 1,700 and 800 feet altitude. Wing slat extension began at an altitude of 1,200 feet and 290 knot airspeed. Wing flap extension began at 900 feet and 280 knot airspeed. The landing gear was extended at 1.5 miles from the runway at an altitude of 400 feet. The ground spoilers were not deployed after landing. The airplane appears to have touched down over 5,000 feet past the runway threshold. The airplane came to rest about 90 degrees left of runway heading.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The failure of the first officer to fly a stabilized approach at the correct airspeed and his failure to execute a missed approach resulting in touchdown about 5,000 feet past the runway threshold at an excessive airspeed and over run of the runway prior to stopping. Contributing to the incident was the failure of the captain to properly supervise the first officer and take

corrective action.

Findings

Occurrence #1: OVERRUN

Phase of Operation: LANDING - ROLL

Findings

1. (C) PLANNED APPROACH - IMPROPER - COPILOT/SECOND PILOT
2. (C) AIRSPEED - EXCESSIVE - COPILOT/SECOND PILOT
3. (C) GO-AROUND - NOT PERFORMED - COPILOT/SECOND PILOT
4. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND
5. RUN ON LANDING - INADVERTENT - FLIGHTCREW

Factual Information

HISTORY OF THE FLIGHT

On January 1, 2002, about 1057 eastern standard time, a McDonnell-Douglas MD-83, Trinidad registration 9Y-THQ, operated by BWIA West Indies Airways, as flight 432, scheduled passenger service from Bridgetown, Barbados, to Miami, Florida, overran the runway while landing at Miami International Airport. Visual meteorological conditions prevailed at the time and an instrument flight rules flight plan was filed. The airplane received minor damage and the airline transport-rated captain, first officer, 4 flight attendants, and 119 passengers were not injured. The flight originated from Barbados, at 0730.

The captain stated the first officer was flying the airplane for the approach and landing. He and the first officer performed a briefing for the localizer 30 approach to Miami International Airport, prior to beginning descent. During landing on runway 30, the airplane floated for a while before touchdown, after the first officer flared for landing. After a few seconds, he, the captain, took control of the airplane during the landing roll. It appeared the airplane would over run the runway and collide with an approach light structure. The captain steered the airplane to the left side of the runway and brought it to a complete stop with the nose wheel in a sandy area. He shut down the engines and deplaned the passengers. The airplane was then towed to the gate. (See captain statement).

The first officer stated that before beginning descent from 31,000 feet, that he and the captain briefed for the localizer 30 approach to Miami International Airport. They crossed the JUNUR intersection at 10,000 feet and 250 knots airspeed. They were given a heading to fly by the air traffic controller to intercept the localizer for runway 30 and then cleared for the approach. As they rounded out into the landing flare, there was no contact with the runway. He applied control column pressure and contacted the runway. He applied engine reverse and firm brakes. The airplane did not decelerate as it should. He applied more reverse and firm brakes and veered the airplane slightly left of center as the approach lights at the end of the runway came into view. The captain continued steering the airplane 90 degrees to the left and stopped with the nose wheel in sand. (See first officer statement).

A pilot-rated passenger stated the airplane was flying extremely fast and at a much higher than normal airspeed during the approach to land. They floated over the runway and finally touched down hard on all three landing gear. The wheel brakes were applied almost immediately and the tires were squealing. The smell of burning rubber entered the cabin. About 2/3 of the way down the runway, the flight attendant told them to brace for impact. As they approached the end of the runway, the pilot hit the left brake hard and the airplane turned to the left and skidded right side first. He saw the approach lights approaching the right side of the airplane. The right wing tip cleared the approach lights and the airplane came to a stop with the nose wheel in sand. They exited the airplane via the aft air stair and were taken to the terminal by bus. (See passenger statement).

Air traffic controllers stated the flight crossed the runway 30 threshold at a high rate of speed and touched down at the intersection of the runway and taxiway Z. The airplane then rolled to the end of the runway and turned to the left, coming to rest with the nose wheel off the runway surface. (See air traffic controller statements).

Recorded radar data from the FAA, Miami Approach Control, showed the flight was at 304

knots groundspeed when descending through 1,000 feet on the approach to land. At 300 feet on the approach, the flight was at 262 knots groundspeed. The last radar contact was at 1055:55 and showed zero feet altitude and 166 knots groundspeed. (See recorded radar data).

METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed at the time of the accident. The Miami International Airport, 1056 surface weather observation was wind from 360 degrees at 8 knots, visibility 10 statute miles, clouds 25,000 feet broken, temperature 21 degrees C, dew point temperature 15 degrees C, altimeter setting 30.10 in Hg.

FLIGHT RECORDERS

The cockpit voice recorder was still operating when the NTSB arrived at the airplane, which had already been towed to a gate, after the incident. The cockpit voice recorder was retained by NTSB and forwarded to the NTSB Vehicle Recorders Division, Washington, D.C., for readout. The recorder did not contain any human voices or air noise similar to an aircraft operation in flight or on the ground. The BWIA International Airways Limited, Flight Operations Manual, states on page 2:6:3, under "Procedures Following a Serious Incident", item 10.3.6, "If relevant, items such as the Cockpit Voice Recorder, Flight Data Recorder and ATC tapes should be preserved." (See Cockpit Voice Recorder Group Chairman Report and Operations Manual Pages).

The digital flight data recorder was retained by NTSB and forwarded to the NTSB Vehicle Recorders Division, Washington, D.C., for readout. The data indicated that as the airplane was descending to land, the airspeed began to increase. The spoilers were deployed for 16 seconds during the approach to land. As the airplane descended through 1,980 feet, the airspeed was 313 knots. The autopilot was switched off and the spoilers were again deployed for 28 seconds. The wing slats and flaps were extended followed by the landing gear. The airplane switched from air mode to ground mode while at an airspeed of 153 knots and on a magnetic heading of 305 degrees. The engine thrust reversers deployed and within 2 seconds, full brake pedal travel was reached. The wing spoilers did not extend during landing. The airplane came to a stop on magnetic heading 209 degrees. (See Specialist's Factual Report of Investigation, Digital Flight Data Recorder).

Analysis of the digital flight data recorder data was performed by The Boeing Company. The approach reference speed (V_{ref}) for the airplane at the incident landing weight was 128 knots with 40 degrees of wing flaps extended and 132 knots with 28 degrees of wing flaps extended. It would be expected that the final approach speed would be stabilized at $V_{ref} + 5$ knots. The descent from cruise flight to 10,000 feet appeared normal and at 10,000 feet the airplane maintained 250 knots airspeed. During descent from 10,000 feet the airspeed began to increase, reaching over 300 knots as the airplane descended through 5,000 feet. An airspeed of over 300 knots was maintained until within 4 miles of the runway and an altitude of 1,500 feet. The airplane crossed over the runway threshold at over 100 feet, as measured by the radio altimeter, and over 200 knots airspeed, at least $V_{ref} + 70$ knots. The touchdown speed was approximately 150 knots. Full wing spoilers or speed brakes were deployed from 4.5 to 2.5 miles remaining to the runway or between 1,700 and 800 feet. Wing slat extension began at an altitude of 1,200 feet and 290 knot airspeed. Wing flap extension began at 900 feet and 280 knot airspeed. The landing gear was extended at 1.5 miles from the runway at an altitude of 400 feet. The ground spoilers were not deployed after landing. The airplane appears to have

touched down over 5,000 feet past the runway threshold. The airplane came to rest about 90 degrees left of runway heading. (See The Boeing Company Report).

MEDICAL AND PATHOLOGICAL INFORMATION

Post incident drug and alcohol testing on specimens obtained from the captain and first officer were negative.

ADDITIONAL INFORMATION

The airplane was released by NTSB on January 1, 2002, to Steve Boyce, BWIA International Airways, Station Manager, Miami, Florida. The retained cockpit voice recorder was released to Steve Boyce on January 11, 2002, and the retained digital flight data recorder was released to Steve Boyce on February 20, 2002.

Pilot Information

Certificate:	Airline Transport	Age:	47, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	11/03/2001
Occupational Pilot:		Last Flight Review or Equivalent:	11/15/2001
Flight Time:	12636 hours (Total, all aircraft), 2022 hours (Total, this make and model), 1514 hours (Pilot In Command, all aircraft)		

Co-Pilot Information

Certificate:	Commercial	Age:	35, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	09/25/2001
Occupational Pilot:		Last Flight Review or Equivalent:	09/10/2001
Flight Time:	3778 hours (Total, all aircraft), 323 hours (Total, this make and model), 2013 hours (Pilot In Command, all aircraft), 74 hours (Last 90 days, all aircraft), 54 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	McDonnell Douglas	Registration:	9Y-THQ
Model/Series:	MD-83	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	49488
Landing Gear Type:	Retractable - Tricycle	Seats:	138
Date/Type of Last Inspection:	05/12/2001, Continuous Airworthiness	Certified Max Gross Wt.:	160000 lbs
Time Since Last Inspection:	232 Hours	Engines:	2 Turbo Fan
Airframe Total Time:	37235 Hours at time of accident	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	JT8D-219
Registered Owner:	Pegasus Aviation, Inc.	Rated Power:	21700 lbs
Operator:	BWIA West Indies Airways, LTD.	Operating Certificate(s) Held:	Foreign Air Carrier (129)
Operator Does Business As:		Operator Designator Code:	TTAF

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KMIA, 11 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1056 EST	Direction from Accident Site:	300°
Lowest Cloud Condition:		Visibility	10 Miles
Lowest Ceiling:	Broken / 25000 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.1 inches Hg	Temperature/Dew Point:	21° C / 15° C
Precipitation and Obscuration:			
Departure Point:	Bridgetown (TBPB)	Type of Flight Plan Filed:	IFR
Destination:	Miami, FL (KMIA)	Type of Clearance:	IFR
Departure Time:	0730 EST	Type of Airspace:	Class D

Airport Information

Airport:	Miami International (MIA)	Runway Surface Type:	Asphalt
Airport Elevation:	11 ft	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	Localizer Only
Runway Length/Width:	9355 ft / 150 ft	VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	6 None	Aircraft Damage:	Minor
Passenger Injuries:	119 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	125 None	Latitude, Longitude:	25.799722, -80.295000

Administrative Information

Investigator In Charge (IIC):	Jeffrey L Kennedy	Report Date:	11/04/2002
Additional Participating Persons:	William C Steelhammer; Boeing Commercial Airplane Group; Long Beach, CA Larry J Dunn; Federal Aviation Administration; Miami, FL George Camps-Roach; Trinidad & Tobago Civil Aviation Authority; Piarco, Trinidad,		
Publish Date:			
Investigation Docket:	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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).