



# National Transportation Safety Board Aviation Accident Final Report

<b>Location:</b>	FAJARDO, PR	<b>Accident Number:</b>	ATL97FA113A
<b>Date &amp; Time:</b>	08/07/1997, 1248 AST	<b>Registration:</b>	N26JA
<b>Aircraft:</b>	Pilatus BN-2 ISLANDER	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious, 4 Minor, 5 None
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Scheduled		

## Analysis

On August 7, 1997, about 1248 Atlantic Standard Time, two Britten-Norman BN-2 airplanes, collided in flight, over the landing threshold of runway 08, at the Diego Jimenez Airport, Fajardo, Puerto Rico (PR). Both airplanes were conducting a visual approach at the uncontrolled airport. The pilot of N1202S, was executing a non-standard right traffic pattern approach to landing, while the pilot of N26JA was executing a standard left traffic pattern approach to landing. The airplanes collided over the approach threshold of runway 08, about 100 feet agl. Passengers on N26JA, stated that the other airplane was coming from the right much lower than their airplane and disappeared under them. The next time they saw the other airplane they were colliding into its tail section. Examination of both airplanes revealed no mechanical discrepancies.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The inadequate visual lookout of the pilot of N1202S which resulted in the overtaking of and collision with N26JA

## Findings

Occurrence #1: MIDAIR COLLISION  
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

### Findings

1. VISUAL LOOKOUT - INADEQUATE - PILOT OF OTHER AIRCRAFT

## Factual Information

### HISTORY OF FLIGHT

On August 7, 1997, about 1248 Atlantic Standard Time, two Britten-Norman BN-2 airplanes, collided in flight, over the landing threshold of runway 8 at the Diego Jimenez Airport, Fajardo, Puerto Rico (PR). N1202S, was registered to Aero Bieke, Inc., AKA Trans-Caribbean Airlines, and operated under the provisions of Title 14 CFR Part 91 for a personal flight. The Airline Transport Pilot (ATP) and two passengers were not injured, while a third passenger received minor injuries, and the airplane was destroyed. The flight departed Vieques, PR, about 1230 on the same day. N26JA, was operated by Flamenco Airways, Inc. under the provisions of Title 14 CFR Part 135 as a scheduled commuter flight. The ATP rated pilot and four passengers were not injured, 4 passengers received minor injuries, one passenger received a serious injury, and the airplane sustained substantial damaged. The flight originated at Culebra, PR, about 1228, on the same day. Visual meteorological conditions prevailed at the Fajardo airport at the time of the accident. A flight plan had not been filed nor was it required for either flight.

Both airplanes were conducting a visual approach to runway 08, at the uncontrolled airport. The pilot of N1202S, was executing a non-standard right traffic pattern approach to landing, while the pilot of N26JA was executing a standard left traffic pattern approach to landing. The airplanes collided over the approach threshold of runway 08, about 100 feet agl.

A passenger seated in the right front seat of N26JA, said that as her aircraft turned on final, she saw the other aircraft [N1202S] out the right window at about the 3:00 o'clock position, (the nose as 12:00 o'clock) and just under the wing. She said that the other aircraft was in a wings level attitude coming right at her, and that when the other aircraft disappeared it still appeared to be going straight wings level. She did not think her pilot saw the other aircraft, and she was not sure how long after the other aircraft disappeared that she felt the impact and saw the other aircraft pointed straight up in front of her aircraft.

A passenger seated in the right rear seat of N26JA, said that the first time she saw the other aircraft it was turning right base to final, but lower than her aircraft. When asked, she said that she recalled the other aircraft was white in color with yellow stripes, and it went under her aircraft and disappeared and she tried to look for it. She said the noise kept her from talking easily with the Judge but he was looking for the other aircraft also, She shouted "MY GOD did you see that aircraft". She looked to see if the pilot of her aircraft had seen the other aircraft. At first he had no reaction, but then he was looking up as if for something above him, her impression was that he saw nothing and continued the descent for landing. She said when she looked out the right window again she was able to see the tail of the other aircraft in front of her, then she started to scream. The other aircraft pitched up and the pilot of her aircraft look surprised, as if this was the first time he had seen the other aircraft. She said that she then could hear the sound of the propeller of her aircraft cutting into the tail of the other aircraft, it then fell off to the left of her aircraft.

A passenger seated in a rear seat of N26JA, on the right side said he first saw the other aircraft when his aircraft was on the downwind about abeam the terminal building, but low, so low that he thought that it was a Agricultural spray plane. He said that his aircraft had lined up on final then he saw the other aircraft come under his aircraft and he was able to see the wing out his left window as if the two aircraft were on a parallel course then it disappeared. He said

that he next felt the impact but never saw the other aircraft again.

Attempts were made to interview passengers on N1202S, however, they were unsuccessful.

#### PERSONNEL INFORMATION

The pilot of Trans Caribbean Airlines N1202S, held an Airline Transport Pilot (ATP) for airplane multiengine land, Commercial pilot certificate for airplane single engine land, and a Flight Instructor certificate for airplane single and multiengine instrument airplanes. The pilot was issued an NTSB Form 6120.1/2 Pilot/Operator Accident/Incident Report, however, it had not been received at the time of this report. The pilot reported 6,200 civilian flight hours in all aircraft on the application for the most recent medical certificate, which was dated March 31, 1997.

The pilot of Flamenco Airways Inc., Flight 202, N26JA, held an ATP Certificate for airplane multiengine land, and a Commercial pilot certificate for airplane single engine land. The pilot reported in his NTSB Form 6120.1/2 that he had accumulated 37,000 hours in all aircraft and 3,200 in type. His most recent first class medical certificate was issued on February 26, 1997, with a restriction that he must wear corrective lenses. The pilot's last proficiency check was a biennial flight review on February 9, 1997, in a Britten Norman BN2A-8 Islander.

#### AIRCRAFT INFORMATION

The Britten-Norman BN2A-26 Islander, N1202S, Serial Number 193, is a 10 seat, twin engine airplane. According to maintenance records the airplane received an Annual Inspection on May 13, 1997, with a recorded total airframe time of 16,892.7 hours. Both cockpit seats remained attached and were equipped with shoulder restraints. All of the passenger seats remained attached to their attachment points and were equipped with emergency briefing cards and floatation devices. The pilot reported that the aircraft and engines were working properly at the time of the accident.

The Britten-Norman BN2A-8 Islander, N26JA, Serial Number 375, is a 10 seat, twin engine airplane. According to maintenance records the airplane received a 100 hour inspection on August 5, 1997, with a recorded total airframe time of 24,737.9 hours. Both cockpit seats remained attached and were equipped with shoulder restraints. All of the passenger seats remained attached to their attachment points and were equipped with emergency briefing cards and floatation devices. The pilot reported that the aircraft and engines were working properly at the time of the accident.

#### METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed at the time of the accident. Additional meteorological information may be obtained in this report on page 4 under section titled Weather Information.

#### AIRPORT INFORMATION

Diego Jimenez Torres Airport-X95, is located about one mile Northeast of Fajardo, Puerto Rico. The airport is publicly owned, by the Puerto Rico Ports Authority, San Juan, Puerto Rico. The airport has no control tower, but does have attendants between 0600 and 1830. The airport reports aircraft operations per year at 25,688. Active runway 08/26, length 3600 feet by 75 feet. The standard traffic pattern for runway 08, is left, the standard traffic pattern for runway 26, is right, and pattern altitude is 1200, feet agl.

## WRECKAGE AND IMPACT INFORMATION

Flamenco Airways, N26JA, was found close to the approach end of runway 08, about 100 feet right of the runway center line facing in a westerly direction. Paint similar to that found on the bottom of the airframe was found on the runway at the impact point where the right main gear collapsed on the runway, about 6 feet right of the runway center line and subsequently skidded in a southeasterly direction across the runway, then into the grass. Numerous gouges were noted in the runway surface consistent with damage observed on the right hand propeller blades and the right main landing gear. Paint similar to that found on N1202S's elevator and horizontal stabilizers was noted on the right side of the nose section of the aircraft.

Trans Caribbean Airlines, N1202S, was found adjacent to the approach end of runway 08, partially blocking the north taxiway entrance to the runway. The aircraft had impacted soft ground just forward of the runway landing surface with the left wing tip, the wing tip was found imbedded several inches in the ground. The aircraft then pivoted on the wing tip, separating it and impacted the runway surface with the nose of the airplane as evidenced by windshield and ray-dome material left at that point. The aircraft then rolled onto the right wing and fell off inverted, twisting the empennage 180 degrees and partially separating it. There was evidence of a small fuel spill, but no fire. Damage to the right elevator, rudder and horizontal stabilizer was consistent with multiple propeller strikes. Shredded right elevator and vertical stabilizer parts were found spread over the clearway for runway 08 from the threshold out to about 200 feet. The parts found were consistent with the damage noted on N1202S.

## ADDITIONAL INFORMATION

### Summary of Pilot Interviews

Mr. Pablo Speroni, pilot of the Trans Caribbean Airlines aircraft N1202S, stated when interviewed, that he had exclusive use of N1202S, and operates an on-demand 135 operation. He said his office was at the airport on the island of Vieques, Puerto Rico, and that on the day of the accident he was operating the accident airplane under CFR part 91, for his personal use.

He stated that he departed Vieques airport (VQS) about 11:30 to 12:00 for the trip to Fajardo (X95). Mr. Speroni stated that his cruise altitude enroute was 1000 feet and the trip was uneventful. He said that on his departure from Vieques airport he broadcast his departure on Unicom frequency 123.0 "departing runway 09 with left crosswind departure", enroute he talked with Roosevelt Roads on 133.15 which he stated was the standard procedure for transitioning their air space and set 0100 in his transponder.

Mr. Speroni said that when he crossed the extended center line of runway 07, at Roosevelt Roads (R/R) near the marina, he called Las Gaviotas and was given approval to change frequency and told to squawk 1200. Mr. Speroni said he then changed to 122.7, (Fajardo unicom) and broadcast... "over Las Gaviotas 1000 feet right downwind for runway 8", and received no reply to his transmission. Mr. Speroni said he elected to use the right downwind because of the turbulence he would have encountered using the standard left downwind procedure. He said that one of his passengers was 74 years old and nervous about flying. Mr. Speroni said he came through the valley to the south of the airport.

Mr. Speroni said his second broadcast on unicom was as he made the left turn to join the right downwind, he proceeded west on downwind and began to descend. Mr. Speroni said when he went west a comfortable distance, by the bends in the small stream, he turned right base as he made another broadcast "right base" and his altitude was about 400 to 500 feet. He said that

made his last broadcast "turning final runway 8". Mr. Speroni said the last radio transmission he had received was from R/R and he was using his number two (2) radio for the unicom and his number one (1) radio was off or tuned to the STT ATIS frequency.

Mr. Speroni said that during the entire time he was on the Fajardo unicom frequency, he never received a return call from the Ports Authority at Fajardo or any other aircraft. Mr. Speroni said that during the approach he used full flaps and with an approach speed of 70 knots the pitch of the airplane would be negative or below the horizon. Mr. Speroni said that he planed his touchdown point at the near side of the runway numbers. He said he was transitioning from approach attitude to landing attitude and reducing the power when he felt the impact. The airplane pitched up, he pushed the nose down and added power, and the airplane rolled to the left with the nose down and impacted the ground.

Pablo Speroni (second interview) Mr. Speroni restated his comments regarding his trip from VSQ to X95..." He stated that his cruise altitude enroute was 1000 feet. He said he contacted R/R's control tower and was squawking 0100 as instructed and remained on the R/R frequency until crossing the extended center line of runway 07, at which time he was told to squawk 1200 and a frequency change was approved. When asked what distance from the end of the runway he turned final he stated that he turned at a comfortable distance for a normal turn to final. Mr. Speroni said that he turned final at 400 to 500 feet and that he leveled his wings after each turn in the pattern and he did not over shoot the turn to final or have to correct back to the final. When asked about the weight and balance form and the loading for the trip that the accident occurred on he would not comment, and added that the pre-flight had nothing to do with the accident. When asked if the use of the right pattern at Fajardo was his normal procedure he said that he did not do it very often. When asked why he used the right pattern Mr. Speroni said it depends on the pilot and the conditions.

Mr. Hector Nazario, Pilot of the Flamenco Airways aircraft N26JA, stated that he had been employed by Flamenco Airways for eight years and had started his flying career in 1958. He said he received his ATP in 1967, in a DeHavilland Heron (HS-114) while flying for PrinAir. Mr. Nazario, said that his monthly schedule was four days flying and four days of rest and that the accident happened on the first day of his flying rotation. He said his duty day started at 07:00 and ended at 17:30, during this time he flew seven legs and accumulated about three hours and thirty minutes of flying time each day. Mr. Nazario said he sleeps from 21:00 to 04:45 daily, exercises for 45 minutes then goes about his daily activities. He stated that he has not had any certificate actions filed against him and has about 3000 hours in type.

Mr. Nazario, said that on the day of the accident he was flying flight 202 from the island of Culebra to Fajardo, Puerto Rico. He started engines at 12:21 and was in the air at 12:23. He said the cruise portion of the flight was uneventful and was flown at 1500 feet. He said the airplane was full with nine passengers, and that his transponder was set to 1200. He said that he was monitoring 121.5 and broadcasting on 122.9 as he left Culebra, and about half way to Fajardo he switched to 122.7 for the unicom at Farjardo.

Mr. Nazario, stated that his first broadcast on unicom was over Palominos Island 5 or 6 miles east of the airport, normally he would talk to other pilots who respond to the unicom broadcast. He said his second broadcast was as he crossed the coast line about 2 to 3 miles east of the airport, this is his normal procedure and the same as the day of the accident. He said the third broadcast "left downwind, runway 08" was made over the airport highway about 1/4 mile east of the airport. He said he crossed Palominos Island at 1500 feet and the highway at 1000

feet. He said that his fourth broadcast "base turn" was at 800 feet then he reported his turn to final at 500 to 600 feet. He said he heard another aircraft say "final". But did not see another aircraft. At 300 feet, he broadcast "short final" and proceeded with his approach. Mr. Nazario said that on approach the Islander has a 5 degree nose up pitch at the approach speed of 80 knots. He said that he saw the other aircraft in front of him, then immediately felt the impact, and the other aircraft filled his windshield. After the impact his airspeed slowed to about 55 knots, he said that upon impact both aircraft went up, the other aircraft broke off to the left, and the runway came into view. He saw the end of the runway and the numbers, he said he dove the aircraft and added power to recover airspeed, he got 70 knots pulled the aircraft up but it was still sinking, the aircraft hit the runway with a soft impact. After landing Mr. Nazario, held right rudder and put power on, the and steered the aircraft off the runway, it spun around to the right then stopped heading to the west. Mr. Nazario explained that he was worried that the sparks would ignite the fuel in the wing tanks as the reason for his exiting the runway. Mr. Nazario said that he shut down the aircraft with the mixtures and magnetos then began to help the passenger in the right front seat and told the rest of the passengers to exit slowly. One passenger with an injured leg was left in the aircraft, until rescuers arrived to assist her.

#### Interview Summary's of FAA POI'S

The FAA, Principal Operations Inspector (POI) for Flamenco Airways said that because of the short time he has been associated with Flamenco Airways he has concentrated on all the "Required" items on the work order and that he will move to the Planned items when time allows prior to the end of the year. He said that he has ridden with the company check-airman while they conducted the annual company checks and attended recurrent training. He said that he has observed the company training in the proper procedures for entry into uncontrolled airports. When asked to make general comments about Flamenco Airways he said that there was no problems with pilot training and only a small problem with the quality of maintenance.

The FAA, POI for Aerobieke DBA Trans Caribbean Airlines, said that during the time she has been the POI for Trans Caribbean Airlines she has investigated the ditching of one company aircraft, a violation issued for flying an aircraft without an Airworthiness Certificate and flying an aircraft that was not on his operating certificate. The Inspector said that during the check ride given to the principle of the airline [Pablo Speroni] she had to issue a Pink Slip for not complying with engine out procedures. The pilot then received 2.5 hrs. of additional training and re-tested the same day with positive results.

#### Witness Statements

Carlos Rosa has been employed by the Ports Authority of Puerto Rico, as an Airport Operations Specialist assigned to the Diego Jimenez Torres Airport Fajardo, Puerto Rico for 17 years. Mr. Rosa said that on the day of the accident he first heard the Flamenco Aircraft broadcast over unicom (122.7) reporting over Palominos Island... he replied "Fajardo Copy". Next, within minutes heard Mr. Speroni broadcast that he was on right downwind for runway 8, but Mr. Rosa said that he did not reply. Then Mr. Rosa said that he heard Flamenco call left downwind for runway 8. Mr. Rosa said that when he felt that two pilots were talking he no longer devoted his full attention to the unicom, and on the day of the accident he diverted his attention to other duties because he felt the two arriving aircraft were aware of each other. Mr. Rosa said that he heard no further communication from the two accident aircraft. Mr. Rosa said that he was expecting to see the Flamenco aircraft on roll-out, but had not, so he started looking and

saw the aircraft in the grass on the south side of the runway.

Jose A. Riollano Operations Supervisor for the Ports Authority of Puerto Rico assigned to the Diego Jimenez Torres Airport Fajardo, Puerto Rico. Mr. Riollano said that, in his position as Operations Supervisor, he had told the pilot of N-1202S not to use the right pattern for runway 8 at the Fajardo airport.

#### Memorandum from U.S. Naval Station Roosevelt Roads

On August 11, 1997, a Memorandum was issued to the FAA and the NTSB from the Air Operations Officer, U.S. Naval Station Roosevelt Roads, PR. It stated that the Tower and Approach audio tapes of 7 August were reviewed for the period 1640Z to 1655Z, (1240 to 1255 ADT) by Naval Station Roosevelt Roads ATC and FAA Flight Standards personnel. The audio tapes failed to reveal any contact with incident aircraft N1202S.

14 CFR Part 91.129(c)(1) Operations in Class D Airspace states in part; Arrival or through flight... Each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering that airspace and thereafter maintain those communications while within that airspace. 91.129(c)(2) Departing flight. (ii) From a satellite airport without an operating control tower, must establish and maintain two-way radio communications with the ATC facility having jurisdiction over the Class D airspace area as soon as practicable after departing.

#### Wreckage Release

N26JA, was released to Flamenco Airways on August 9, 1997, and N1202S, was released to Mr. Pablo Speroni on August 9, 1997.

#### Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	61, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last Medical Exam:</b>	02/26/1997
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	37000 hours (Total, all aircraft), 3200 hours (Total, this make and model), 36000 hours (Pilot In Command, all aircraft), 168 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Pilatus	Registration:	N26JA
Model/Series:	BN-2 ISLANDER BN-2 ISLAN	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	375
Landing Gear Type:	Tricycle	Seats:	10
Date/Type of Last Inspection:	08/04/1997, 100 Hour	Certified Max Gross Wt.:	6200 lbs
Time Since Last Inspection:	6 Hours	Engines:	2 Reciprocating
Airframe Total Time:	24738 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-540-E4C5
Registered Owner:	FLAMENCO AIRWAYS INC	Rated Power:	260 hp
Operator:	FLAMENCO AIRWAYS INC	Air Carrier Operating Certificate:	Commuter Air Carrier (135); On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	FLMA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	JNR, 20 ft msl	Observation Time:	1255 EST
Distance from Accident Site:	50 Nautical Miles	Direction from Accident Site:	330°
Lowest Cloud Condition:	Scattered / 2700 ft agl	Temperature/Dew Point:	30° C / 23° C
Lowest Ceiling:	Broken / 22000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	13 knots, 110°	Visibility (RVR):	0 ft
Altimeter Setting:	30 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	CULEBRA, PR (CPX)	Type of Flight Plan Filed:	None
Destination:	(X95)	Type of Clearance:	VFR on top
Departure Time:	1221 EST	Type of Airspace:	Class E

## Airport Information

Airport:	DIEGO JIMENEZ TORRES (X95)	Runway Surface Type:	Asphalt
Airport Elevation:	63 ft	Runway Surface Condition:	Dry
Runway Used:	8	IFR Approach:	None
Runway Length/Width:	3600 ft / 75 ft	VFR Approach/Landing:	Full Stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious, 4 Minor, 4 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Serious, 4 Minor, 5 None	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	BUTCH WILSON	<b>Adopted Date:</b>	02/15/2000
<b>Additional Participating Persons:</b>	RICHARD HERNDON; SAN JUAN, PR JORGE D PEREZ; CULEBRA, PR MICHAEL FORTE; SAN JUAN, PR PAUL D WESTON; WASHINGTON, DC		
<b>Publish Date:</b>			
<b>Investigation Docket:</b>	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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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.