



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	LOIZA, PR	<b>Accident Number:</b>	ATL98LA129
<b>Date &amp; Time:</b>	09/24/1998, 1319 AST	<b>Registration:</b>	N91237
<b>Aircraft:</b>	Convair 240	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Non-scheduled		

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## Analysis

During the initial takeoff roll, there was a fluctuation of Brake Mean Engine Pressure (BMEP- a measurement of engine output) on #2 engine, and the pilot elected to abort the takeoff. The pilot completed two additional engine run-ups, and no abnormalities were noted. During the second attempted takeoff, and as the airplane climbed through 200 feet MSL, a loud bang or back fire from the #2 engine was heard. BMEP fluctuated and dropped showing about 150 BMEP difference with engine #1. The engine oil temperature started to rise rapidly, the engine oil pressure dropped and the airplane started to vibrate. The first officer reduced the #2 engine to 'dry' power, upon which a second bang or backfire was heard from the #2 engine. The #2 propeller was then feathered by the First Officer. Since altitude could not be maintained, the pilot ditched the airplane in the salt water lagoon. An FAA Inspector who examined the crash site noted that the right engine propeller was not fully feathered, and the wing flaps were extended about three degrees.. The airplane was recovered from the water 70 days after the accident. The flight crew completed the engine out emergency procedure in accordance with the prescribed checklist.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of power in the No. 2 engine for undetermined reasons, and the inability of the pilot to establish a climb and/or maintain altitude. A factor was the incompletely feathered No. 2 propeller..

## Findings

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Occurrence #1: LOSS OF ENGINE POWER  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) 1 ENGINE
  2. (C) REASON FOR OCCURRENCE UNDETERMINED
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Occurrence #2: FORCED LANDING  
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

### Findings

3. PROPELLER FEATHERING - NOT ATTAINED
  4. PROPER CLIMB RATE - NOT POSSIBLE - PILOT IN COMMAND
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Occurrence #3: DITCHING  
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

### Findings

5. TERRAIN CONDITION - WATER

## Factual Information

On September 24, 1998, about 1319 atlantic standard time, a Convair 240, N91237, collided with water about two miles short of runway 28 near Luis Munoz Marin International Airport in Loiza, Puerto Rico. The airplane was operated by Trans Florida Airlines as Flight 237, under the provisions of Title 14 CFR Part 121, and Visual Flight Rules (VFR). Visual meteorological conditions prevailed and a VFR flight plan was filed. The Airline Transport Pilot (ATP), First Officer, and one passenger was not injured, and the airplane received substantial damage. The cargo flight departed Luis Munoz Marin International Airport enroute to Santiago, Cuba, at 1315 AST.

According to the pilot-in-command, after a normal pre-flight inspection and an engine run-up, he began the takeoff roll. During the takeoff roll, there was a fluctuation of Brake Mean Engine Pressure (BMEP-a measurement of engine output), on #2 engine. At this point the pilot elected to abort the takeoff. The airplane was brought back to a hangar where a Federal Aviation Administration (FAA) Airworthiness Inspector boarded the aircraft and witnessed another engine run-up with no abnormalities noted. The pilot then stated, the airplane was taxied to the departure runway where a third engine run-up was performed with no abnormalities noted. The pilot stated, after take off, as the airplane climbed through 200 feet MSL, he heard a loud bang or back fire from the #2 engine, the BMEP indicator fluctuated and dropped showing about 150 BMEP difference with respect to engine #1, oil temperature started to rise rapidly, oil pressure dropped and the airplane started to vibrate. At this point, according to the pilot, he commanded the first officer to reduce the #2 engine to "dry" power, upon which a second bang or backfire was heard from the #2 engine. The #2 propeller was then feathered by the First Officer. The airplane was leveled off at 400 feet MSL where, according to the pilot, in an attempt to return the airplane to the airport, altitude could not be maintained and the airplane was force landed in a salt water lagoon. The airplane came to rest in approximately eight feet of water.

The term "dry" power refers to engine power without the use of ADI (anti detonant injection) water injection. This gave the right engine 53 inches of manifold pressure as opposed to 59 inches of manifold pressure available with water injection.

An FAA Inspector who examined the crash site noted that the left wing was separated from the fuselage with the left engine in place, the left wing tip was damaged and the tail cone received slight damage. Also noted were that the nacelle flaps appeared to be in the mid-position, the right engine propeller was not fully feathered, and the wing flaps were extended about three degrees. Due to hampered recovery efforts brought about by recently passed Hurricane Georges, the airplane was not recovered from the salt water lagoon for 70 days. The flight crew completed the engine out emergency procedure in accordance with the prescribed checklist.

## Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	41, 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, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	04/30/1998
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	7772 hours (Total, all aircraft), 1409 hours (Total, this make and model), 5195 hours (Pilot In Command, all aircraft), 174 hours (Last 90 days, all aircraft), 72 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Convair	<b>Registration:</b>	N91237
<b>Model/Series:</b>	240 240	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	140
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	09/11/1998, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	41790 lbs
<b>Time Since Last Inspection:</b>	69 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	33835 Hours	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	R-2800 CA3
<b>Registered Owner:</b>	BAHAMA AIR FERRIES INC.	<b>Rated Power:</b>	2400 hp
<b>Operator:</b>	TRANS FLORIDA AIRLINES INC.	<b>Operating Certificate(s) Held:</b>	Air Cargo
<b>Operator Does Business As:</b>	TRANS FLORIDA AIRLINES	<b>Operator Designator Code:</b>	TFAA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SJU, 10 ft msl	Distance from Accident Site:	2 Nautical Miles
Observation Time:	1301 AST	Direction from Accident Site:	270°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	14 knots / 18 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	31° C / 24° C
Precipitation and Obscuration:			
Departure Point:	SAN JUAN, PR (SJU)	Type of Flight Plan Filed:	IFR
Destination:	SANTIAGO, CU (MDST)	Type of Clearance:	VFR
Departure Time:	1315 AST	Type of Airspace:	Class C

## Airport Information

Airport:	LUIS MUNOZ MARIN INTL (SJU)	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	BUTCH WILSON	Report Date:	09/28/1999
Additional Participating Persons:	ROBERTO EZHEVARRIA SCOTT M GRABON		
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 <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> .		

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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](#).