



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	ISLA VERDE, PR	<b>Accident Number:</b>	MIA86MA217
<b>Date &amp; Time:</b>	07/22/1986, 1353 AST	<b>Registration:</b>	N27PR
<b>Aircraft:</b>	DOUGLAS DC-3	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal, 1 Serious
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

SHORTLY AFTER TAKEOFF, THE ACFT'S CLIMB PERFORMANCE BGN TO DETERIORATE & THE R ENG STARTED TO OVERHEAT. SUBSEQUENTLY, THE R ENG WAS FEATHERED & THE CREW ATTEMPTED TO RETURN TO THE ARPT. THE RADIO TRANSMITTER BCM UNINTELLIGIBLE, SO THE TOWER PSNL CLEARED THE ACFT TO LAND ON RWY 10 & ASKED THE CREW TO KEY THEIR MIKE TWICE, IF THEY UNDERSTOOD. THE MIKE WASKEYED TWICE. THE ACFT ENTERED A R DWNWND FOR RWY 10 AT A VERY LOW ALT. ACCORDING TO WITNESSES, THE ACFT WENT INTO A STEEP BANK AS IT WAS TURNING ONTO A BASE LEG OVER WATER, THE R WING TIP HIT THE WATER & THE ACFT CARTWHEELED & CRASHED. THE COPLT RPRTD THAT AFTER FEATHERING THE R ENG, THE VMC OF 84 KTS WAS MAINTAINED; HOWEVER, HE BELIEVED THE ACFT STALLEDJUST PRIOR TO IMPACT. A TEARDOWN OF THE R ENG REVEALED THE EDGE OF THE #8 PISTON & ITS PISTON RINGS HAD FAILED. METAL FILINGS WERE FOUND IN THE OIL & THE OIL PUMP WAS SCORED. THERE WAS EVIDENCE OF OIL STARVATION TO THE CRANKSHAFT JOURNAL,AS WELL AS PISTON SLAP ASSOCIATED WITH THE RING FAILURE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

## Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF  
Phase of Operation: CLIMB - TO CRUISE

### Findings

1. (F) ENGINE ASSEMBLY,RING - FAILURE,TOTAL
  2. (F) ENGINE ASSEMBLY,BEARING - FAILURE,TOTAL
  3. (F) ENGINE ASSEMBLY,MASTER ROD - FAILURE,TOTAL
  4. PROPELLER FEATHERING - PERFORMED
  5. PRECAUTIONARY LANDING - INITIATED
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Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: APPROACH

### Findings

6. (F) COMM/NAV EQUIPMENT,TRANSMITTER - FAILURE,TOTAL
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Occurrence #3: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: APPROACH - VFR PATTERN - BASE TURN

### Findings

7. MANEUVER - INITIATED
  8. (C) AIRSPEED - INADEQUATE - PILOT IN COMMAND
  9. (C) AIRCRAFT HANDLING - IMPROPER - PILOT IN COMMAND
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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

10. (F) TERRAIN CONDITION - WATER,ROUGH

## Factual Information

### History of Flight

#### Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	60, Male
<b>Airplane Rating(s):</b>	Multi-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>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	01/31/1986
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	29100 hours (Total, all aircraft), 2000 hours (Total, this make and model), 150 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

#### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	DOUGLAS	<b>Registration:</b>	N27PR
<b>Model/Series:</b>	DC-3 DC-3	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	11776
<b>Landing Gear Type:</b>	Retractable - Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	05/28/1986, AAIP	<b>Certified Max Gross Wt.:</b>	26200 lbs
<b>Time Since Last Inspection:</b>	97 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	44394 Hours	<b>Engine Manufacturer:</b>	WRIGHT
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	R-1820-202A
<b>Registered Owner:</b>	DIAZ AVIATION CORPORATION	<b>Rated Power:</b>	1200 hp
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SJU, 9 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1354 AST	Direction from Accident Site:	50°
Lowest Cloud Condition:	Scattered / 3500 ft agl	Visibility	6 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	15 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	31° C / 23° C
Precipitation and Obscuration:			
Departure Point:	SAN JUAN, PR (SJU)	Type of Flight Plan Filed:	VFR
Destination:	ST. KITT, OF (SKB)	Type of Clearance:	None
Departure Time:	1343 AST	Type of Airspace:	Class D

## Airport Information

Airport:	PUERTO RICO INTL (SJU)	Runway Surface Type:	Concrete
Airport Elevation:	10 ft	Runway Surface Condition:	Dry
Runway Used:	10	IFR Approach:	None
Runway Length/Width:	8016 ft / 150 ft	VFR Approach/Landing:	Forced Landing; Full Stop; Traffic Pattern

## Wreckage and Impact Information

Crew Injuries:	1 Fatal, 1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 1 Serious	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	RONALD W BIRD	Report Date:	
Additional Participating Persons:	ANDREW A ALSTON; MIAMI, FL JOE DOMINO; SAN JUAN, PR RICHARD HERNDON; SAN JUAN, PR		
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:pubinquiry@ntsb.gov">pubinquiry@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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