



National Transportation Safety Board Aviation Accident Final Report

Location:	ST. CROIX, VI	Accident Number:	MIA87FA013
Date & Time:	10/28/1986, 0915 AST	Registration:	N604SS
Aircraft:	GRUMMAN G-73	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Fatal, 5 Serious, 9 Minor

Flight Conducted Under: Part 135: Air Taxi & Commuter - Scheduled

Analysis

THE PLTS LOST AILERON CONTROL SHORTLY AFTER TAKEOFF WHILE IN A LEFT TURN. THE LEFT TURNING TENDENCIES OF THE ACFT COULD NOT BE CORRECTED AND THE ACFT CRASH LANDED IN THE CARRIBEAN SEA. POST CRASH INSPECTION OF THE ACFT REVEALED THE LEFT AILERON CONTROL CABLE WAS TRAPPED WITHIN A BUNDLE OF ELECTRICAL WIRES AND CABLES. THIS OCCURRED WHEN AN ELECTRICAL CABLE FROM A REVERSE CURRENT RELAY IN THE RIGHT WING TO THE MAIN JUNCTION BOX IN THE LEFT CABIN AREA AT THE CENTER WING WAS CHANGED AND SECURED. THE AILERON CABLE CHAFED THROUGH THE PROTECTIVE COVER OF THE LARGE ELECTRICAL CABLE. WHEN CONTACT WAS MADE WITH THE METAL ELECTRICAL CABLE THE AILERON CABLE ARCHED AT SEVERAL POINTS AND SEPARATED AT TWO DIFFERENT POINTS CAUSING A LOSS OF AILERON CONTROL.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CLIMB

Findings

1. (C) ELECTRICAL SYSTEM,ELECTRIC WIRING - INCORRECT
2. (C) MAINTENANCE,SERVICE OF AIRCRAFT/EQUIPMENT - IMPROPER - COMPANY MAINTENANCE PERSONNEL
3. (C) ELECTRICAL SYSTEM,ELECTRIC WIRING - CHAFED
4. (C) ELECTRICAL SYSTEM,ELECTRIC WIRING - ARCING
5. (C) FLT CONTROL SYST,AILERON CONTROL - SEPARATION
6. (C) FLT CONTROL SYST,AILERON CONTROL - LOSS,TOTAL

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: CLIMB

Findings

7. (C) AIRCRAFT HANDLING - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #3: FORCED LANDING

Phase of Operation: DESCENT

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

8. TERRAIN CONDITION - WATER,ROUGH

Factual Information

Pilot Information

Certificate:	Airline Transport	Age:	47, Male
Airplane Rating(s):	Multi-engine Land; Multi-engine Sea; Single-engine Land; Single-engine Sea	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:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	07/11/1986
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	10340 hours (Total, all aircraft), 195 hours (Total, this make and model), 10055 hours (Pilot In Command, all aircraft), 160 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GRUMMAN	Registration:	N604SS
Model/Series:	G-73 G-73	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	S-4
Landing Gear Type:	Retractable - Tricycle	Seats:	17
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	12750 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	P&W
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	R1340-S1H1
Registered Owner:	VIRGIN ISLAND SEAPLANE SHUTTLE	Rated Power:	600 hp
Operator:	VIRGIN ISLAND SEAPLANE SHUTTLE	Operating Certificate(s) Held:	Commuter Air Carrier (135)
Operator Does Business As:		Operator Designator Code:	FHEA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	STX, 60 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	0947 AST	Direction from Accident Site:	200°
Lowest Cloud Condition:	Scattered / 1500 ft agl	Visibility	15 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	28° C / 23° C
Precipitation and Obscuration:			
Departure Point:	CHRISTIANSTED, VI (SSB)	Type of Flight Plan Filed:	Company VFR
Destination:	ST. THOMAS, VI (SPB)	Type of Clearance:	None
Departure Time:	0914 AST	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Fatal, 5 Serious, 7 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 5 Serious, 9 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	JEFFERY L KENNEDY	Report Date:	
Additional Participating Persons:	ROGER BAKER; WASHINGTON, DC DONALD MCDERMONT; ST CROIX, VI MICHAEL BRAUNSTEIN; ST CROIX, VI CHARLES FREEHLING; ST CROIX, VI		
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/ .		

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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](#).