



National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|-------------------------------------------|-------------------------|-----------------------------|
| Location: | ST. CROIX, | Accident Number: | MIA87FA013 |
| Date & Time: | October 28, 1986, 09:15 Local | 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): | Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| 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: | July 11, 1986 |
| Occupational Pilot: | Yes | 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

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|--------------------------------------|--------------------------------------------------------|---------------------------------------|----------------------------|
| Aircraft Make: | GRUMMAN | Registration: | N604SS |
| Model/Series: | G-73 G-73 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| 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: | | Rated Power: | 600 Horsepower |
| Operator: | | Operating Certificate(s) Held: | Commuter air carrier (135) |
| Operator Does Business As: | | Operator Designator Code: | FHEA |

Meteorological Information and Flight Plan

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|----------------------------------|----------------------------------|--------------------------------------|------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | STX ,60 ft msl | Distance from Accident Site: | 5 Nautical Miles |
| Observation Time: | 09:47 Local | Direction from Accident Site: | 200° |
| Lowest Cloud Condition: | Scattered / 1500 ft AGL | Visibility | 15 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| 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: | No Obscuration; No Precipitation | | |
| Departure Point: | CHRISTIANSTED (SSB) | Type of Flight Plan Filed: | Company VFR |
| Destination: | ST. THOMAS (SPB) | Type of Clearance: | None |
| Departure Time: | 09:14 Local | Type of Airspace: | Class G |

Airport Information

| | | | |
|----------------------|-------------|---------------------------|----------------|
| Airport: | | Runway Surface Type: | Water |
| Airport Elevation: | 0 ft msl | Runway Surface Condition: | Water-choppy |
| Runway Used: | 0 | IFR Approach: | None |
| Runway Length/Width: | 0 ft / 0 ft | VFR Approach/Landing: | Forced landing |

Wreckage and Impact Information

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|---------------------|-----------------------------|----------------------|-------------|
| 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): Kennedy, Jeffery

Additional Participating Persons: ROGER BAKER; WASHINGTON, DC
DONALD MCDERMONT; ST CROIX
MICHAEL BRAUNSTEIN; ST CROIX
CHARLES FREEHLING; ST CROIX

Original Publish Date:

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=31729>

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](#).