



National Transportation Safety Board Aviation Accident Data Summary

Location:	Hilton Head, SC	Accident Number:	MIA01FA206
Date & Time:	08/01/2001, 0751 EDT	Registration:	N1VY
Aircraft:	Mitsubishi MU-2B-35	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Analysis

The airplane was on final approach to land at Hilton Head Airport, when according to witnesses, it suddenly rolled to the right, and descended, initially impacting trees at about the 70-foot level, and then impacting the ground. A fire then ensued upon ground impact, and the debris field spanned about 370 feet along an azimuth of about 082 degrees. Examination of the airplane wreckage revealed that left wing flap actuator and jack nut measurements were consistent with the wing flaps being extended to 40 degrees, and on the right wing the flap jack nut and actuator measurements were consistent with the right flap being extended to about a 20-degrees. In addition, the right flap torque tube assembly between the flap motor and the flap stop assembly had disconnected, and the flap torque tube assembly's female coupler which attaches to the male spline end of the flap motor and flap stop assembly was found with a cotter pin installed through the female coupler of the flap stop assembly. The cotter pin, had not been placed through the spline and the coupler consistent with normal installation as per Mitsubishi's maintenance manual, or as specified in Airworthiness Directive 88-23-01. Instead, the cotter pin had missed the male spline on the flap motor. In addition, the flap coupler on the opposite side of the flap motor was found to also found to not have a cotter pin installed. Company maintenance records showed that on April 3, 2001, about 87 flight hours before the accident, the airplane was inspected per Airworthiness Directive (AD) 88-23-01, which required the disassembly, inspection, and reassembly of the flap torque tube joints. In addition, on July 9, 2001, the airplane was given a phase 1 inspection, and Bankair records showed that a company authorized maintenance person performed the applicable maintenance items, and certified the airplane for return to service.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Improper maintenance/installation and and inadequate inspection of the airplane's flap torque tube joints during routine maintenance by company maintenance personnel, which resulted in the right flap torque tube assembly coupler becoming detached and the flaps developing asymmetrical lift when extended, which resulted in an uncontrolled roll, a descent, and an impact with a tree during approach to land.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. MAINTENANCE, COMPLIANCE WITH AD - ATTEMPTED - COMPANY MAINTENANCE PERSONNEL
2. (C) MAINTENANCE, INSTALLATION - IMPROPER - COMPANY MAINTENANCE PERSONNEL

- 3. (C) FLT CONTROL SYST,WING FLAP CONTROL CABLE/ROD - LOOSE PART/BOLT/NUT/CLAMP/ETC
- 4. (C) MAINTENANCE,INSPECTION - INADEQUATE - COMPANY MAINTENANCE PERSONNEL

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
 Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
 5. AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
 Phase of Operation: DESCENT - UNCONTROLLED

Findings
 6. OBJECT - TREE(S)

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
 Phase of Operation: DESCENT - UNCONTROLLED

Findings
 7. TERRAIN CONDITION - GROUND

Pilot Information

Certificate:	Commercial	Age:	50
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Helicopter
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	None
Flight Time:	4184 hours (Total, all aircraft), 483 hours (Total, this make and model), 114 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mitsubishi	Registration:	N1VY
Model/Series:	MU-2B-35	Engines:	2 Turbo Prop
Operator:	BANKAIR INC	Engine Manufacturer:	Garrett
Operating Certificate(s) Held:	On-demand Air Taxi (135)	Engine Model/Series:	TPE331-6-252M
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SAV, 50 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	9 knots / , 40°
Temperature:	23° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	Savannah, GA (SAV)	Destination:	Hilton Head, SC (HXD)

Airport Information

Airport:	Hilton Head (HXD)	Runway Surface Type:	Asphalt
Runway Used:	3	Runway Surface Condition:	Dry
Runway Length/Width:	4300 ft / 75 ft		

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	32.164722, -80.733611		

Administrative Information

Investigator In Charge (IIC):	John W Lovell	Adopted Date:	12/30/2003
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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