



National Transportation Safety Board Aviation Accident Final Report

Location:	ELKRIDGE, MD	Accident Number:	BF093FA016
Date & Time:	12/10/1992, 1535 EST	Registration:	N7770B
Aircraft:	BEECH C-45G	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

THE PILOT SUPERVISED THE LOADING OF THE AIRPLANE. ACCORDING TO INFO FROM A PERSON THAT HELPED LOAD THE PLANE, THE BILL OF LADING, AND ACTUAL WEIGHTS AND MEASUREMENTS OF THE CARGO AFTER THE ACCIDENT, THE PLANE WAS LOADED TO A GROSS WEIGHT OF 11,979 LBS WITH THE CG 2.7 INCHES BEHIND THE AFT LIMIT. AT THE DESTINATION, THE FLIGHT WAS VECTORED FOR AN ILS RUNWAY 10 APPROACH. ABOUT 3 MI FROM THE RUNWAY, THE PILOT WAS TOLD TO MAKE A MISSED APPROACH DUE TO INADEQUATE SEPARATION FROM TRAFFIC. THE PILOT ACKNOWLEDGED, BUT SOON THEREAFTER, RADAR CONTACT WITH THE PLANE WAS LOST. WITNESSES SAW THE PLANE DESCEND FROM A LOW CLOUD LAYER BEFORE IT CRASHED. ONE WITNESS SAID ITS WINGS WERE MOVING FROM SIDE TO SIDE AND THE PLANE WAS FALLING FASTER THAN IT WAS MOVING FORWARD. THERE WAS EVIDENCE THE PLANE HAD IMPACTED IN A FLAT ATTITUDE WITH LITTLE FORWARD MOVEMENT. FOUR CARGO STRAPS WERE FOUND LOOSE WITH NO SIGN OF TENSILE OVERLOAD; 3 OTHERS AND A RESTRAINING BOARD WERE FOUND LOOSE AS IF THEY HAD NOT BEEN USED. NO PREIMPACT MECHANICAL PROBLEM WAS FOUND. THE WIND WAS FROM 090 DEG AT 21 GUSTING 32 KTS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE PILOT TO PROPERLY SECURE THE CARGO, WHICH ALLOWED A SHIFT IN THE CENTER OF GRAVITY DURING A MISSED APPROACH MANEUVER AND RESULTED IN SUBSEQUENT LOSS OF AIRCRAFT CONTROL AND FLYING SPEED. A FACTOR RELATED TO THE ACCIDENT WAS FAILURE OF THE PILOT TO ASSURE THE AIRPLANE WAS LOADED WITHIN ITS PROPER WEIGHT AND BALANCE LIMITATIONS.

Findings

Occurrence #1: CARGO SHIFT

Phase of Operation: MISSED APPROACH (IFR)

Findings

1. (C) SECURITY OF CARGO - INADEQUATE - PILOT IN COMMAND
2. (F) AIRCRAFT WEIGHT AND BALANCE - IMPROPER - PILOT IN COMMAND
3. WEATHER CONDITION - GUSTS
4. WEATHER CONDITION - TURBULENCE
5. CARGO/BAGGAGE - NOT SECURED
6. TIE DOWN - INADEQUATE - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: MISSED APPROACH (IFR)

Findings

7. STALL/MUSH - UNCONTROLLED

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	33, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last Medical Exam:	10/19/1992
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	2658 hours (Total, all aircraft), 657 hours (Total, this make and model), 1560 hours (Pilot In Command, all aircraft), 180 hours (Last 90 days, all aircraft), 90 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	BEECH	Registration:	N7770B
Model/Series:	C-45G C-45G	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	AF-320
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	01/02/2000, AAIP	Certified Max Gross Wt.:	11500 lbs
Time Since Last Inspection:		Engines:	2 Turbo Prop
Airframe Total Time:	26436 Hours	Engine Manufacturer:	GARRETT
ELT:	Installed, not activated	Engine Model/Series:	TPE-331-1-101
Registered Owner:	KALITTA FLYING SERVICE	Rated Power:	620 hp
Operator:	KALITTA FLYING SERVICE	Air Carrier Operating Certificate:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	KKFA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	BWI, 146 ft msl	Observation Time:	1543 EST
Distance from Accident Site:	4 Nautical Miles	Direction from Accident Site:	113°
Lowest Cloud Condition:	Unknown / 0 ft agl	Temperature/Dew Point:	6° C / 6° C
Lowest Ceiling:	Broken / 900 ft agl	Visibility	3 Miles
Wind Speed/Gusts, Direction:	21 knots/ 32 knots, 90°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	DAYTON, OH (DAY)	Type of Flight Plan Filed:	IFR
Destination:	BALTIMORE, MD (BWI)	Type of Clearance:	IFR
Departure Time:	1319 EST	Type of Airspace:	Class D; Class E

Airport Information

Airport:	BALT-WASH INT'L (BWI)	Runway Surface Type:	Asphalt
Airport Elevation:	146 ft	Runway Surface Condition:	Wet
Runway Used:	1	IFR Approach:	ILS
Runway Length/Width:	9452 ft / 200 ft	VFR Approach/Landing:	

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
Total Injuries:	1 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Jeffrey B Guzzetti	Adopted Date:	09/28/1993
Additional Participating Persons:	JEROME FRECHETTE; WASHINGTON, DC JEREMY AKEL; WASHINGTON, DC CYNTHIA KEEGAN; WASHINGTON, DC CARL LUDWIG; BALTIMORE, MD		
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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