



Aviation Investigation Final Report

Location:	GUNTERSVILLE, Alabama	Accident Number:	ATL92LA159
Date & Time:	August 12, 1992, 18:30 Local	Registration:	N416HC
Aircraft:	BEECH A36	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Ferry		

Analysis

THE PILOT WAS PROCEEDING TO HIS DESTINATION AT FLIGHT LEVEL 210, BETWEEN CLOUD LAYERS. HE WAS APPROACHING A CLOUD CELL, AND REQUESTED TO DEVIATE TO THE NORTH. THE PILOT NOTICED NOTHING ON HIS WEATHER RADAR, AND HE DECIDED TO CONTINUE ON COURSE AFTER A VFR AIRCRAFT AHEAD OF HIM REPORTED NO SIGNIFICANT TURBULENCE. AS HE ENTERED THE CLOUD FORMATION, THERE WAS 'ONE VERY HARD HIT OF TURBULENCE', WITH ASSOCIATED ICE AND HAIL. HE THEN LOST CONTROL OF THE AIRCRAFT. AFTER A LOSS OF ABOUT 10,000 FEET OF ALTITUDE, HE WAS ABLE TO REGAIN AIRCRAFT CONTROL. DURING THE RECOVERY, HE NOTICED THE AIRSPEED IN EXCESS OF 'RED LINE.' HE LANDED THE AIRPLANE AT A NEARBY AIRPORT WITHOUT FURTHER INCIDENT. AN FAA INSPECTOR DETERMINED THAT THE AIRCRAFT WAS STRUCTURALLY DAMAGED IN FLIGHT. NTAP RADAR DATA SHOWS THAT THE FLIGHT PENETRATED AN AREA OF HEAVY WEATHER RETURNS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S INADEQUATE EVALUATION OF THE IN FLIGHT WEATHER CONDITIONS, AND HIS SUBSEQUENT LOSS OF AIRCRAFT CONTROL, WHICH RESULTED IN THE DESIGN STRESS LIMITS OF THE AIRCRAFT BEING EXCEEDED. FACTORS WERE CLOUDS, THE ASSOCIATED TURBULENCE, AND THE HAIL IN THE CLOUDS.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: CRUISE - NORMAL

Findings

1. (F) WEATHER CONDITION - CLOUDS
2. (F) WEATHER CONDITION - TURBULENCE IN CLOUDS
3. (F) WEATHER CONDITION - HAIL
4. (C) WEATHER EVALUATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: CRUISE - NORMAL

Findings

5. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
6. (C) DESIGN STRESS LIMITS OF AIRCRAFT - EXCEEDED

Factual Information

Pilot Information

Certificate:	Commercial	Age:	27, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	November 14, 1991
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1600 hours (Total, all aircraft), 102 hours (Total, this make and model), 1600 hours (Pilot In Command, all aircraft), 205 hours (Last 90 days, all aircraft), 105 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N416HC
Model/Series:	A36 A36	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	E-2408
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:	January 2, 2000 Unknown	Certified Max Gross Wt.:	3650 lbs
Time Since Last Inspection:		Engines:	1 Turbo prop
Airframe Total Time:		Engine Manufacturer:	ALLISON
ELT:		Engine Model/Series:	250B17C
Registered Owner:	TREES UNLIMITED, INC.	Rated Power:	420 Horsepower
Operator:	TREES UNLIMITED, INC.	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	HSV ,630 ft msl	Distance from Accident Site:	29 Nautical Miles
Observation Time:	19:50 Local	Direction from Accident Site:	40°
Lowest Cloud Condition:	Scattered / 4000 ft AGL	Visibility	7 miles
Lowest Ceiling:	Overcast / 11000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	26°C / 23°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	LITTLE ROCK , AR (LIT)	Type of Flight Plan Filed:	IFR
Destination:	ATLANTA , GA (PDK)	Type of Clearance:	IFR
Departure Time:	15:30 Local	Type of Airspace:	Class A

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	34.349494,-86.269615(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	JERRY YATES; BIRMINGHAM , AL
Original Publish Date:	May 26, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=8646

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