



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	MANOR, Texas	Accident Number:	FTW91FA080
Date & Time:	May 16, 1991, 10:20 Local	Registration:	N9435Q
Aircraft:	BEECH V35B	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	4 Fatal
Flight Conducted Under:	Part 91: General aviation		

Analysis

THE PLT LOST CTL OF THE ACFT IN IFR CONDS AS THE PLANE WAS DSCNDG THRU ABT 6000' MSL, IN AN AREA OF CONVECTIVE ACTIVITY WITH MODERATE TO SEVERE TURBC & UP/DOWN DRAFTS. BOTH WINGS SEPD FM THE ACFT & WRECKAGE WAS SCATTERED OVER AN AREA OF APRX 1.5 MI. CALCULATIONS SHOWED THAT AT THE TIME OF THE ACDNT, THE ACFT'S GROSS WT WAS 29 LBS OVER ITS MAX LIMIT, AND THE CENTER-OF-GRAVITY (CG) WAS ABT 3.3 TO 5.3 INCHES BEHIND THE AFT LIMIT. UNDER THESE CONDS, THE ACFT'S MANEUVERING STABILITY & STICK FORCE PER 'G' CHARACTERISTICS WOULD HAVE BEEN SERIOUSLY DEGRADED. IN TURN, THIS WOULD HAVE ALLOWED THE PLT TO EXCEED THE STRUCTURAL DESIGN LIMITS OF THE ACFT WITH LITTLE OR NO EFFORT. AN EXAM OF THE WRECKAGE DISCLOSED EVIDENCE OF APPARENT FLAP ASYMMETRY, A COND WHICH WAY HAVE OCCURRED DRG THE IN-FLT BREAKUP OF THE ACFT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S OPERATION OF THE AIRCRAFT AT A GROSS WEIGHT AND CENTER OF GRAVITY WHICH EXCEEDED THE CERTIFICATED OPERATING LIMITATIONS, RESULTING IN LOSS OF CONTROL AND STRUCTURAL OVERLOAD. TURBULENCE WAS A RELATED FACTOR.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: DESCENT - NORMAL

Findings

1. (C) AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND
2. (F) WEATHER CONDITION - TURBULENCE IN CLOUDS

Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: DESCENT - UNCONTROLLED

Findings

3. FLIGHT CONTROL,FLAP - ASYMMETRICAL
4. (C) DESIGN STRESS LIMITS OF AIRCRAFT - EXCEEDED - PILOT IN COMMAND
5. WING - OVERLOAD

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Private	Age:	36,Male
Airplane Rating(s):	Single-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:	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	March 30, 1990
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	315 hours (Total, all aircraft), 38 hours (Total, this make and model), 241 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N9435Q
Model/Series:	V35B V35B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Utility	Serial Number:	D-9317
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	April 26, 1991 Annual	Certified Max Gross Wt.:	3400 lbs
Time Since Last Inspection:	7 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3883 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	IO-520-BA
Registered Owner:		Rated Power:	285 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	5 miles
Lowest Ceiling:	Broken / 1700 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	27°C / 23°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	ADDISON , TX (ADS)	Type of Flight Plan Filed:	IFR
Destination:	AUSTIN , TX (AUS)	Type of Clearance:	IFR
Departure Time:	09:04 Local	Type of Airspace:	Class E

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	3 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Fatal	Latitude, Longitude:	30.3404,-97.55088(est)

Administrative Information

Investigator In Charge (IIC): Wandel, Warren

Additional Participating Persons: ROGER ANDERSON; SAN ANTONIO , TX

Original Publish Date: December 4, 1992

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=23260>

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](#).