



# Aviation Investigation Final Report

<b>Location:</b>	COTULLA, Texas	<b>Accident Number:</b>	FTW96LA002
<b>Date &amp; Time:</b>	October 1, 1995, 14:15 Local	<b>Registration:</b>	N7247W
<b>Aircraft:</b>	BEECH                      A36	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	5 None
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

THE AIRPLANE IMPACTED TREES AFTER IT OVERRAN THE DEPARTURE END OF THE 2,200-FOOT GRASS STRIP DURING TAKEOFF. THE PILOT STATED THAT INITIALLY THE AIRPLANE ACCELERATED NORMALLY FOR THE SHORT FIELD TAKEOFF UNTIL ROTATION SPEED WAS ATTAINED. SOON AFTER LIFTOFF THE AIRPLANE NEVER GAINED MORE AIRSPEED 'LIKE IF SOMETHING WAS HOLDING THE AIRPLANE DOWN.' THE PILOT FURTHER STATED THAT WHEN HE REALIZED THAT HE WAS NOT GOING TO BE ABLE TO CLEAR THE TREES AT THE DEPARTURE END OF THE STRIP, HE ELECTED TO ABORT THE TAKEOFF. HE DETERMINED THAT THE AIRPLANE WAS WITHIN WEIGHT AND BALANCE LIMITS, AND HE CALCULATED THE TAKEOFF DISTANCE AND DETERMINED THAT 'THEY HAD AMPLE TAKEOFF DISTANCE.' A REVIEW OF THE TAKEOFF DISTANCE CHARTS IN THE PILOT'S OPERATING HANDBOOK REVEALED THAT TO CLEAR A 50-FOOT OBSTACLE REQUIRED 2,350 FEET WITH THE FLAPS DOWN, AND 2,950 FEET WITH THE FLAPS UP.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S DELAY IN ABORTING THE TAKEOFF. A FACTOR WAS THE PILOT'S IMPROPER USE OF THE AIRCRAFT PERFORMANCE DATA.

## Findings

Occurrence #1: OVERRUN  
Phase of Operation: TAKEOFF - ABORTED

Findings

1. (F) PERFORMANCE DATA - IMPROPER USE OF - PILOT IN COMMAND
2. SHORT FIELD TAKEOFF/PROCEDURE - PERFORMED - PILOT IN COMMAND
3. (C) ABORTED TAKEOFF - DELAYED - PILOT IN COMMAND

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Occurrence #2: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - ABORTED

Findings

4. OBJECT - TREE(S)

## Factual Information

On October 1, 1995, at 1415 central daylight time, a Beech A36, N7247W, was substantially damaged during takeoff from a private airstrip near Cotulla, Texas. The private pilot and his 4 passengers were not injured. The airplane, owned by Excellent Aviation Rentals Inc., of Houston, Texas, was being operated under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the business flight for which an IFR flight plan was filed.

According to the pilot, the winds were light and variable when he taxied to the northwest end of the 2,200 foot grass airstrip for a departure to the southeast. The pilot added that after completing the run-up and configuring the airplane in a short field takeoff configuration, he applied full power for takeoff.

The pilot further stated that initially the airplane accelerated normally until rotation speed was attained for the short field takeoff. The pilot added that after becoming airborne, "the airplane never gained any more airspeed after liftoff, like if something was holding the airplane down."

The pilot stated that when he realized that the airplane was not going to be able to clear the trees at the departure end of the airstrip, he elected to abort the takeoff. The airplane came to rest about 200 to 300 feet into the trees.

Prior to departing the airstrip, the pilot stated that he had determined that the airplane was within takeoff and CG limits. Additionally, he reported that he calculated the takeoff distance for the prevailing configuration and determined that "they had ample takeoff distance."

A review of the performance charts for takeoff distance from the pilot's operating handbook (copies enclosed) revealed the takeoff ground run distance with flaps down and up to be 1,200 and 1,500 feet respectively. Likewise, it was determined that 2,350 and 2,950 feet respectively would be required to clear a 50 foot obstacle with flaps down and up. The height of the obstacles at the departure end of the airstrip was not provided by either the pilot or the operator.

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	21, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	February 23, 1995
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	799 hours (Total, all aircraft), 64 hours (Total, this make and model), 639 hours (Pilot In Command, all aircraft), 274 hours (Last 90 days, all aircraft), 133 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BEECH	<b>Registration:</b>	N7247W
<b>Model/Series:</b>	A36 A36	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	E-2272
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	August 17, 1995 100 hour	<b>Certified Max Gross Wt.:</b>	3650 lbs
<b>Time Since Last Inspection:</b>	56 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2121 Hrs	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-550-B6A
<b>Registered Owner:</b>	EXCELLENT AVIATION RENTALS	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>	WEST HOUSTON AIRPORT CORP,	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	COT ,400 ft msl	<b>Distance from Accident Site:</b>	29 Nautical Miles
<b>Observation Time:</b>	14:00 Local	<b>Direction from Accident Site:</b>	115°
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	15 miles
<b>Lowest Ceiling:</b>	Broken / 4500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	110°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	33°C / 22°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	HOUSTON , TX (IWS )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	14:15 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	PRIVATE RANCH AIRSTRIP NONE	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	460 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	13	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2200 ft / 100 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	4 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	5 None	<b>Latitude, Longitude:</b>	28.429277,-99.230178(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Casanova, Hector
<b>Additional Participating Persons:</b>	JESSE CAVAZOS; SAN ANTONIO , TX
<b>Original Publish Date:</b>	February 14, 1996
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=19678">https://data.nts.gov/Docket?ProjectID=19678</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).