National Transportation Safety Board
Aviation Accident Final Report

Location:	Bay View, TX	**Accident Number:**	DFW05LA034
Date & Time:	12/10/2004, 1250 CST	**Registration:**	N648KA
Aircraft:	Beech BE-200	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	6 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

While attempting to depart from the 3,500-foot long grass airstrip with a 14 knot quartering tailwind, the 5,800-hour pilot reported that at an airspeed of approximately 95 knots, "the airplane yawed left and rolled left abruptly as the aircraft came off the ground briefly." The airplane settled back onto the ground, before again climbing back into the air approximately 20 degrees left of the runway heading. Subsequently, the airplane's landing gear struck tree tops before it impacted the ground. A passenger added that he "noticed the flaps were up during takeoff." Approximately three minutes after the accident, a weather reporting station located 5.6 nautical miles southwest of the accident site reported wind from 010 degrees at 14 knots. Examination of the engines revealed rotational scoring throughout the first and second stage turbines. No mechanical anomalies were observed.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain directional control as result of his improper runway selection for takeoff. A contributing factor was the prevailing right quartering tailwind.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (F) WEATHER CONDITION - TAILWIND
2. (C) WRONG RUNWAY - SELECTED - PILOT IN COMMAND
3. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
4. OBJECT - TREE(S)

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF - ROLL/RUN

Findings
5. TERRAIN CONDITION - GROUND

Factual Information

On December 10, 2004, approximately 1150 central standard time, a twin-engine Beech BE-200 turbo-prop powered airplane, N648KA, was destroyed when it impacted trees following a loss of control during takeoff from the Rancho Buena Vista Airport (TS94), near Bay View, Texas. The airline transport pilot and five passengers were not injured. The airplane was registered to RKO LLC, of Houston, Texas, and operated by a private individual doing business as Charter One of Houston, Texas. Visual meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan was filed for the 14 Code of Federal Regulations Part 135 on-demand air charter flight. The cross-country flight was originating at the time of the accident and was destined for Houston, Texas.

The 5,800-hour pilot reported in the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2) that during takeoff roll on runway 23 (3,500 foot long by 100 foot wide grass runway), at an airspeed of approximately 95 knots, "the airplane yawed left and rolled left abruptly as the aircraft came off the ground briefly." The pilot stated that he applied full right rudder and leveled the wings as he slightly lowered the nose and the airplane settled back onto the ground, approximately 20 degrees left of the runway heading.

As the airplane approached a line of trees and tall grass, the pilot decided that stopping the airplane "was not an option," and "applied back pressure" to clear the trees. However, the landing gear struck the tree tops, and "the airplane stalled and came down in the tall grass, sliding sideways to the right and coming to rest upright." As the pilot and passengers were evacuating the airplane, the pilot observed fire coming from the right engine/wing area.

In a written statement, one of the passengers reported that during takeoff, "the pilot tried to lift off three times," and "it felt like the tail of the [air]plane hit the ground on the third try." The passenger also stated that they asked the pilot what speed he took off at, and recalled the pilot saying "80 knots." The passenger added that he "noticed the flaps were up during takeoff."

Examination of the airplane by local law enforcement personnel revealed the fuselage of the airplane was destroyed by fire forward of the empennage. The right propeller was separated from the right engine, and the three landing gears were separated from the airplane.

The airplane underwent its most recent 200-hour inspection on November 8, 2004, at an airframe total time of 6,532.5 hours. At the time of the accident, the airframe and engines had accumulated approximately 33 hours of flight time since its last inspection.

At 1153, the automated surface observing system at the Port Isabel-Cameron County Airport (PIL), located 5.6 nautical miles southwest of the accident site, reported wind from 010 degrees at 14 knots, visibility 10 statute miles, clear sky, temperature 75 degrees Fahrenheit, dew point 44 degrees Fahrenheit, and an altimeter setting of 30.13 inches of Mercury.

Examination of the left and right Pratt and Whitney PT6A-41 engines were conducted on July 12 and 13, 2005, at the facilities of Pratt and Whitney Canada in St. Hubert, Quebec, Canada, under the supervision of the Transportation Safety Board of Canada. The results of this examination were as follows:

Examination of the left engine, serial number 81577, revealed that the reduction and accessory gearbox were destroyed by fire. The propeller shaft was fractured adjacent to the number five bearing, which was consistent with impact damage. The forward section of the shaft remained

attached to the propeller hub. All of the reduction gearbox mounted controls and accessories were destroyed by fire. The exhaust duct displayed light compressional deformation around the underside of the duct. The gas generator case compressor housing displayed compressional deformation. The compressor inlet case and compressor bleed valves were consumed by fire. The fuel manifold was intact with fire damage.

The compressor spacers displayed circumferential rubbing consistent with radial contact with adjacent blade tips. The centrifugal impeller shroud face displayed circumferential rubbing consistent with contact to the impeller vane. A fine dirt mixture was observed within the combustion section. The first stage power turbine vane ring- airfoils remained intact. The upstream baffle face inner cup displayed rubbing consistent with contact with the compressor turbine hub. The downstream side baffle inner cup displayed circumferential rubbing concentrated around the upper circumference that had heat discoloration consistent with the first stage power turbine hub contact.

The first stage power turbine shroud displayed circumferential scoring around the upper circumference consistent with contact from the power turbine blade tips. The first stage power turbine blade tips displayed circumferential rubbing consistent with contacting the power turbine shroud. The second stage turbine vane ring abradable air seal displayed circumferential rubbing and scoring with heat discoloration and material transfer consistent with contacting the air seal rotor. The second stage power turbine shroud displayed circumferential scoring around the upper circumference consistent with contact with the second stage power turbine blade tips.

Examination of the right engine, serial number 81477, revealed that the reduction and accessory gearbox were destroyed by fire. The propeller shaft was fractured at the number five bearing, which was consistent with impact. The reduction gearbox mounted controls were intact on the forward portion of the housing. The exhaust duct displayed compressional deformation. The upper circumference was partially burned through. The gas generator compressor housing displayed compressional deformation. The compressor inlet and compressor bleed valves were destroyed by fire. The fuel manifold was intact, with fire damage.

The compressor turbine vane ring was intact. The downstream side inner drum displayed circumferential rubbing with heat discoloration, consistent with axial contact with the compressor turbine disc. The compressor turbine shroud remained intact. The blade platform downstream sides displayed circumferential rubbing consistent with contact with the compressor turbine blade tips. The compressor turbine blades displayed circumferential scoring. The first stage power turbine vane ring was found intact. The upstream baffle face and inner cup displayed rubbing consistent with contacting the compressor turbine hub. The downstream side baffle inner cup displayed circumferential rubbing around the upper circumference with head discoloration, and was found consistent with contacting the first stage power turbine hub.

The first stage power turbine shroud displayed circumferential scoring around the upper circumference, consistent with radial contact with the power turbine blade tips. The first stage power turbine blade tips displayed circumferential rubbing. The upstream side hub displayed circumferential scoring consistent with the radial contact with the interstage baffle. The upstream side blade platforms displayed circumferential scoring consistent with the axial contact with the first stage vane ring. The second stage power turbine vane ring remained

intact. The abradable air seal displayed circumferential rubbing and scoring with heat discoloration and material transfer consistent with contacting the air seal rotor. The second stage power turbine shroud displayed circumferential scoring around the upper circumference consistent with contact with the second stage power turbine blade tips.

Pilot Information

Certificate:	Airline Transport; Commercial	**Age:**	37, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 1 Without Waivers/Limitations	**Last FAA Medical Exam:**	06/01/2004
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	5800 hours (Total, all aircraft), 400 hours (Total, this make and model), 5050 hours (Pilot In Command, all aircraft), 144 hours (Last 90 days, all aircraft), 55 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N648KA
Model/Series:	BE-200	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	BB-648
Landing Gear Type:	Retractable - Tricycle	**Seats:**	9
Date/Type of Last Inspection:	11/01/2004, AAIP	**Certified Max Gross Wt.:**	12500 lbs
Time Since Last Inspection:	33 Hours	**Engines:**	2 Turbo Prop
Airframe Total Time:	6532.5 Hours as of last inspection	**Engine Manufacturer:**	Pratt & Whitney
ELT:	Installed, not activated	**Engine Model/Series:**	PT6A-41
Registered Owner:	Stewart, Daryl, G	**Rated Power:**	850 hp
Operator:	Stewart, Daryl, G	**Operating Certificate(s) Held:**	On-demand Air Taxi (135)
Operator Does Business As:	Charter 1	**Operator Designator Code:**	YSDA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	PIL, 19 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	1153 CDT	**Direction from Accident Site:**	200°
Lowest Cloud Condition:	Clear	**Visibility**	10 Miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	16 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	10°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.11 inches Hg	**Temperature/Dew Point:**	24°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Port Isabell, TX	**Type of Flight Plan Filed:**	IFR
Destination:	Houston, TX	**Type of Clearance:**	IFR
Departure Time:	CST	**Type of Airspace:**	

Airport Information

Airport:	Rancho Buena Vista Airport (TS94)	**Runway Surface Type:**	Grass/turf
Airport Elevation:	20 ft	**Runway Surface Condition:**	Dry
Runway Used:	23	**IFR Approach:**	None
Runway Length/Width:	3500 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Destroyed
Passenger Injuries:	5 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	6 None	**Latitude, Longitude:**	26.251111, -97.300556

Administrative Information

Investigator In Charge (IIC):	Frank McGill	**Report Date:**	10/27/2005
Additional Participating Persons:	Jesus M Cavazos; Federal Aviation Administration; San Antonio, TX		
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.ntsb.gov/pubdms/.		