



Aviation Investigation Final Report

Location:	TULSA, Oklahoma	Accident Number:	FTW99LA203
Date & Time:	July 23, 1999, 16:00 Local	Registration:	N6712W
Aircraft:	Beech C23	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During final landing approach the airplane touched down hard resulting in substantial damage. The pilot was demonstrating a power off landing. During the landing flare, he noticed that his 'aiming point' was 'moving in the wrong direction.' He 'immediately tried to add power and as [he] was doing this [he] arrived at the ground - 3 pointed the aircraft, which resulted in damage.' The pilot stated that the runway had 'a large drop from about 50 percent of the length to the north.' He further stated that he thought 'the gradual loss of headwind when [he] descended below the crest of the runway, and the resultant loss of translational lift, allowed an increase in descent rate that went undetected until the flare.'

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 the proper descent rate, which resulted in a hard landing.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) PROPER DESCENT RATE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On July 23, 1999, at 1600 central daylight time, a Beech C23 airplane, N6712W, was substantially damaged during a hard landing at the Tulsa International Airport, Tulsa, Oklahoma. The airline transport rated pilot and his pilot-rated passenger were not injured. The airplane was registered to Tulsair Beechcraft Inc. of Tulsa and operated by the pilot. No flight plan was filed and visual meteorological conditions prevailed for the 14 Code of Federal Regulations Part 91 personal cross-country flight, which originated from Wichita, Kansas, approximately 1500.

According to the pilot, he was demonstrating a "power off landing when out of normal approach position." On final approach to runway 18R, "all appeared normal." The "airspeed was 60 kts," and the rate of descent was "approximately 500 feet/min." During the landing flare, the pilot noticed that his "aiming point" was "moving in the wrong direction." He "immediately tried to add power and as [he] was doing this [he] arrived at the ground - 3 pointed the aircraft, which resulted in damage."

The pilot stated that runway 18R "has a large drop from about 50 percent of the length to the north." He further stated that he thought "the gradual loss of headwind when [he] descended below the crest of the runway, and the resultant loss of translational lift, allowed an increase in descent rate that went undetected until the flare."

An FAA inspector examined the airplane and reported that the right main and nose landing gear assemblies were separated, the firewall was buckled, and the left wing's forward spar was damaged.

Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	52, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	May 18, 1999
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	13400 hours (Total, all aircraft), 8 hours (Total, this make and model), 11600 hours (Pilot In Command, all aircraft), 195 hours (Last 90 days, all aircraft), 73 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N6712W
Model/Series:	C23 C23	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	M-2251
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	September 30, 1998 Annual	Certified Max Gross Wt.:	2450 lbs
Time Since Last Inspection:	47 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2401 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-360-A4R
Registered Owner:	TULSAIR BEEHCRAFT INC.	Rated Power:	180 Horsepower
Operator:	DAVID L. WILLIAMS	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:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	35°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	WICHITA , KS (BEC)	Type of Flight Plan Filed:	None
Destination:	(TUL)	Type of Clearance:	VFR
Departure Time:	15:00 Local	Type of Airspace:	Class C

Airport Information

Airport:	TULSA INTERNATIONAL TUL	Runway Surface Type:	Asphalt
Airport Elevation:	677 ft msl	Runway Surface Condition:	Dry
Runway Used:	18R	IFR Approach:	None
Runway Length/Width:	6101 ft / 150 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Snyder, Georgia
Additional Participating Persons:	CARY E WILCOX; OKLAHOMA CITY , OK
Original Publish Date:	June 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=46929

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