



Aviation Investigation Final Report

Location:	Mobile, Arizona	Accident Number:	WPR12LA211
Date & Time:	May 13, 2012, 14:30 Local	Registration:	N5521A
Aircraft:	Beech F33A	Aircraft Damage:	Substantial
Defining Event:	Runway excursion	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot stated that he applied takeoff power, and the airplane accelerated along the centerline of the runway. As the airplane accelerated through about 50 to 55 knots, it suddenly yawed to the left. Despite the student pilot's control inputs, the airplane continued to the left and exited the runway. Examination of the airplane's flight control system and nose wheel steering system revealed no mechanical failures or malfunctions that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The student pilot's failure to maintain directional control during takeoff.

Findings

Aircraft	Directional control - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Takeoff	Loss of control on ground
Takeoff	Runway excursion (Defining event)
Takeoff	Collision with terr/obj (non-CFIT)

On May 13, 2012, about 1430 mountain standard time, a Beech F33A, N5521A, sustained substantial damage during takeoff at the Mobile Airport (1AZ0), Mobile, Arizona. The airplane was registered to Airline Training Center Arizona, Inc, and operated as an instructional flight under the provisions of Title 14 Code of Federal Regulations Part 91. The student pilot, sole occupant of the airplane, was not injured. Visual meteorological conditions prevailed and a company flight plan was filed. The local flight originated from the Phoenix-Goodyear Airport (GYR), Goodyear, Arizona, about 1309.

The student pilot reported that he was practicing a series of full stop landings and takeoffs at 1AZ0. The first three landings and takeoffs were uneventful and he noted that the wind was light, requiring almost no crosswind correction, however, he observed several "dust devils" near the airport and throughout the valley. The student pilot stated that as he taxied onto runway 9, a 4,500-foot long, 75-foot wide asphalt runway, the windsock indicated northerly wind from seven to eight knots and that the dust devil southeast of the airport could not be seen anymore. The student pilot applied takeoff power and the airplane accelerated along the centerline of the runway. As the airspeed accelerated through about 50 to 55 knots, the airplane suddenly yawed to the left and despite the student pilot's control inputs, continued to the left and exited the runway. Subsequently, the airplane struck several bushes to the left of the runway.

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that the inboard portion of the right wing was crushed aft. Additional damage was observed on the right horizontal stabilizer. The FAA inspector reported that flight control continuity was established throughout the airplane's primary flight control system. Examination of the nose wheel landing gear and steering linkages revealed no mechanical anomalies that would have precluded normal operation.

A review of recorded data from a weather station located GYR, located about 19 miles north of the accident site, revealed at 1447 conditions were wind from 250 degrees at 10 knots, visibility 10 statute miles, few clouds at 15,000 feet, temperature 39-degrees Celsius, dew point -1 degree Celsius, and an altimeter setting of 29.87 inches of Mercury.

Pilot Information

Certificate:	Student	Age:	23, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	June 23, 2009
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	29 hours (Total, all aircraft), 29 hours (Total, this make and model), 2 hours (Pilot In Command, all aircraft), 29 hours (Last 90 days, all aircraft), 29 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N5521A
Model/Series:	F33A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	CE-1338
Landing Gear Type:		Seats:	5
Date/Type of Last Inspection:	April 22, 2012 AAIP	Certified Max Gross Wt.:	3200 lbs
Time Since Last Inspection:	51 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	23536 Hrs at time of accident	Engine Manufacturer:	CONT MOTOR
ELT:	Installed, not activated	Engine Model/Series:	IO-520-BB65
Registered Owner:	AIRLINE TRAINING CENTER ARIZONA INC	Rated Power:	285 Horsepower
Operator:	AIRLINE TRAINING CENTER ARIZONA INC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	GYR,968 ft msl	Distance from Accident Site:	19 Nautical Miles
Observation Time:	14:37 Local	Direction from Accident Site:	360°
Lowest Cloud Condition:	Few / 15000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.87 inches Hg	Temperature/Dew Point:	39°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Goodyear, AZ (GYR)	Type of Flight Plan Filed:	Company VFR
Destination:	Goodyear, AZ (GYR)	Type of Clearance:	None
Departure Time:	13:09 Local	Type of Airspace:	

Airport Information

Airport:	Mobile Airport 1AZ0	Runway Surface Type:	Asphalt
Airport Elevation:	1261 ft msl	Runway Surface Condition:	Dry
Runway Used:	09	IFR Approach:	None
Runway Length/Width:	4500 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	33.111946,-112.269165(est)

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Gary Hendrickson; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	August 15, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=83673

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