



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Williams, Arizona	Accident Number:	GAA19CA060
Date & Time:	November 14, 2018, 12:06 Local	Registration:	N264PC
Aircraft:	Beech 36	Aircraft Damage:	Substantial
Defining Event:	Collision during takeoff/land	Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, during an uphill takeoff into ascending terrain, about 4,000 ft down the 6,000-ft-long runway and at 80 knots, he rotated the airplane and stayed in ground effect to gain airspeed. He began pulling back to establish a climb, but the stall warning horn sounded, so he reduced the pitch attitude. He added that he "constantly attempted" to pitch up until he heard the stall horn. At the end of the runway, he retracted the landing gear, but it did not affect the airplane's performance. He reported that he knew the airplane had attained a positive climb rate but did not know the specific value. He then saw that the airplane was going to strike a tree, so he pulled back hard, but the airplane struck the tree and then impacted terrain.

The airplane sustained substantial damage to the right wing.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The airport's automated weather observation station reported that, about 9 minutes after the accident, the wind was calm, temperature 50°F, dew point 3°F, and an altimeter setting of 30.41 inches of mercury. The airplane departed from runway 18.

The airport elevation was about 6,691 ft mean sea level (msl). Runway 18 was 6,000 ft by 100 ft with a 1.0% up gradient. The calculated density altitude was 7,128 ft. The calculated takeoff distance with flaps up was 2,442 ft, and the takeoff distance over a 50-ft obstacle was 4,440 ft. The calculated climb rate was 670 ft per minute.

The airplane was equipped with additional tip tanks per a supplemental type certificate, which increased the allowable maximum gross weight to 3,833 lbs. The pilot reported that the airplane's weight at the time of the accident was 3,797 lbs with a center of gravity of 80.7 inches, which was near the forward center of gravity limit.

The pilot added that the Federal Aviation Administration (FAA) inspector estimated that the tree was 35 to 40 ft tall. The FAA inspector provided an on-scene picture, which included the elevation and latitude and longitude coordinates for the accident site. The elevation was 6,716 ft msl, and based on the coordinates, about 0.4 mile from the end of the runway.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to attain a sufficient climb rate during initial climb in high-density altitude conditions with the airplane near its forward center of gravity and maximum gross weight limits, which resulted in an impact with trees.

Findings

Aircraft	Climb rate - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Environmental issues	Tree(s) - Effect on operation
Aircraft	CG/weight distribution - Capability exceeded
Aircraft	Maximum weight - Capability exceeded

Factual Information

History of Flight

Initial climb	Miscellaneous/other
Initial climb	Attempted remediation/recovery
Initial climb	Collision during takeoff/land (Defining event)

Pilot Information

Certificate:	Private	Age:	75, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	March 15, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 12, 2018
Flight Time:	(Estimated) 1310 hours (Total, all aircraft), 214 hours (Total, this make and model), 1248 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N264PC
Model/Series:	36 A36	Aircraft Category:	Airplane
Year of Manufacture:	2002	Amateur Built:	
Airworthiness Certificate:	Utility	Serial Number:	E-3444
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	April 1, 2018 Annual	Certified Max Gross Wt.:	3833 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1468.8 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-550-39B
Registered Owner:		Rated Power:	300 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KCMR, 6677 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	19:15 Local	Direction from Accident Site:	219°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.4 inches Hg	Temperature/Dew Point:	10°C / -16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Williams, AZ (CMR)	Type of Flight Plan Filed:	VFR
Destination:	Avalon, CA (AVX)	Type of Clearance:	VFR
Departure Time:	12:02 Local	Type of Airspace:	Class G

Airport Information

Airport:	H A CLARK MEMORIAL FIELD CMR	Runway Surface Type:	Asphalt
Airport Elevation:	6690 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	6000 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	35.305557, -112.194442(est)

Administrative Information

Investigator In Charge (IIC):	Benhoff, Kathryn
Additional Participating Persons:	Carey Atnip; FAA; Las Vegas, NV
Original Publish Date:	June 10, 2019
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98638

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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](#).