



Aviation Investigation Final Report

Location:	San Antonio, Texas	Accident Number:	GAA19CA011
Date & Time:	October 5, 2018, 11:30 Local	Registration:	N6674Y
Aircraft:	Beech 55	Aircraft Damage:	Substantial
Defining Event:	Abrupt maneuver	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, the day before the accident flight, he had flown the airplane and wanted to become more comfortable with new instruments that had been installed. So, after the flight, while in a hangar, he and a friend turned the airplane's electrical power on to familiarize the pilot with the autopilot system and specifically with how it would follow heading bug settings. During the familiarization, they "ran the [pitch] trim all the way up."

The pilot added that, before takeoff for the accident flight, he did not check the pitch trim setting because he believed it would be the same as his previous flight, instead of the pitch trim setting after his autopilot ground familiarization. He added that, during takeoff, the nose pitched up severely. He lowered the nose, and the airplane entered a negative G condition. He realized that he "did not latch the seat belt very good" and saw that his seatbelt had disconnected and that he was no longer in his seat and could not regain airplane control. The airplane struck the runway, porpoised, and the nose landing gear collapsed. The airplane skidded and struck a taxiway light.

Postaccident examination of the airplane revealed that the vertical trim tab was in the full-down position, indicating that full nose-up trim was applied.

The airplane sustained substantial damage to both engines and the fuselage.

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

The Pilot's Operating Handbook checklist titled, "Before Takeoff," stated:

Seat Belts and Shoulder Harnesses – CHECK... 15. Trim – AS REQUIRED FOR TAKE-OFF

Probable Cause and Findings

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

The pilot's improper takeoff trim setting and failure to properly secure his seatbelt, which resulted in a loss of airplane control. Contributing to the accident was the pilot's failure to follow the Before Takeoff checklist.

Findings

Aircraft	Elevator tab control system - Incorrect use/operation
Aircraft	Flight compartment equipment - Incorrect use/operation
Personnel issues	Aircraft control - Pilot
Personnel issues	Task monitoring/vigilance - Pilot
Aircraft	Pitch control - Attain/maintain not possible
Personnel issues	Use of checklist - Pilot
Environmental issues	Runway/taxi/approach light - Contributed to outcome

Factual Information

History of Flight

Prior to flight	Miscellaneous/other
Takeoff	Abrupt maneuver (Defining event)
Takeoff	Abnormal runway contact
Takeoff	Landing gear collapse
Takeoff	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	79, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	June 21, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	September 20, 2015
Flight Time:	(Estimated) 3907 hours (Total, all aircraft), 1322 hours (Total, this make and model), 3897 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N6674Y
Model/Series:	55 E55	Aircraft Category:	Airplane
Year of Manufacture:	1979	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	TE-1168
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	March 20, 2017 Annual	Certified Max Gross Wt.:	5324 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	5414.5 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	C91 installed, not activated	Engine Model/Series:	IO-520-CB8B
Registered Owner:		Rated Power:	285 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:	KSAT, 789 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	16:51 Local	Direction from Accident Site:	328°
Lowest Cloud Condition:	Scattered / 2800 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	29°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	San Antonio, TX (SAT)	Type of Flight Plan Filed:	None
Destination:	San Antonio, TX (SAT)	Type of Clearance:	VFR
Departure Time:	11:30 Local	Type of Airspace:	Class C

Airport Information

Airport:	SAN ANTONIO INTL SAT	Runway Surface Type:	Concrete
Airport Elevation:	809 ft msl	Runway Surface Condition:	Dry
Runway Used:	13R	IFR Approach:	None
Runway Length/Width:	8502 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	29.538888,-98.480278(est)

Administrative Information

Investigator In Charge (IIC):	Benhoff, Kathryn
Additional Participating Persons:	Victor Lopez; FAA; San Antonio, TX
Original Publish Date:	April 8, 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=98435

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).