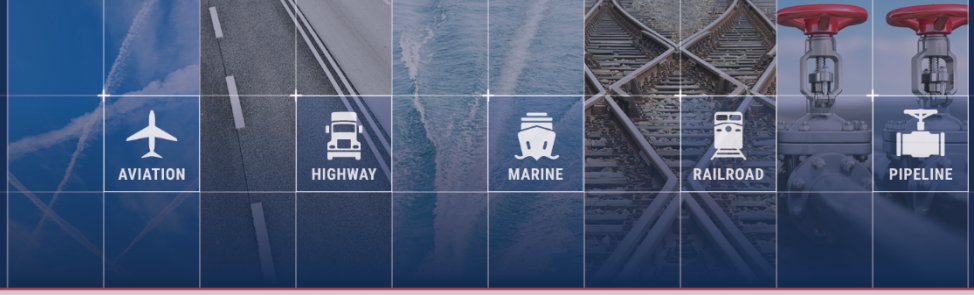

Aviation Investigation Factual Report

Location:	MEXIA, Texas	**Accident Number:**	FTW00FA072
Date & Time:	January 21, 2000, 17:30 Local	**Registration:**	N3MT
Aircraft:	Beech 95-B55	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

HISTORY OF FLIGHT

On January 21, 2000, at 1730 central standard time, a Beech Baron 95-B55 twin-engine airplane, N3MT, was destroyed when it impacted terrain while maneuvering in the traffic pattern at the Limestone County Airport, Mexia, Texas. The airplane was registered to and operated by the pilot. The non-instrument rated private pilot, sole occupant of the airplane, was fatally injured. Dusk visual meteorological conditions prevailed and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The cross-country flight originated from Austin, Texas, at 1646.

Two pilot-rated witnesses, located at the airport, stated that the pilot radioed to the fixed base operator (FBO) stating that he was on downwind and then on base leg for runway 18. The witnesses stated that the pilot then called the FBO stating that he "didn't have a green gear light." He added that the mechanical indicator was showing the nose gear in the extended position. The pilot requested that the two witnesses come out and look at the landing gear as he conducted a low pass over runway 18. The witnesses stated that the airplane flew over the runway at 200 feet at a "very slow airspeed." They noted that the landing gear appeared to be in the extended position and that the flaps were in the approach position. As the two witnesses started to walk back into the FBO to radio the pilot with what they saw, they observed the airplane initiate a climb and a "gradual turn to the left." They added that they heard a "small amount of power being added to the engines, but not full power." Both witnesses stated that the engines "sounded good and the airplane appeared to be under control." Once inside the FBO, the witnesses made two unsuccessful attempts to contact the pilot. After the second unsuccessful attempt, the witnesses went outside to look for the airplane and saw a plume of smoke about two miles southeast of the airport. They drove to the accident site and found the airplane engulfed in flames.

Other witnesses, located south of the accident site, stated that they observed the airplane climbing and then turning to the left. They observed the airplane making a "particularly steep" turn to the left followed by it "spinning to the ground," and exploding into flames as it impacted the ground. Approximately 5 minutes after impact, a secondary explosion was observed by the witnesses at the accident site.

PERSONNEL INFORMATION

The private pilot was issued his airplane multi-engine land rating on October 5, 1997. He qualified for a third class medical certificate on October 19, 1998, with the limitation, "Must Wear Corrective Lenses." Review of the pilot's logbooks revealed that he had accumulated approximately 726 total flight hours, of which 498 hours were in multi-engine airplanes. He

had accumulated approximately 396 hours in the same make and model as the accident airplane. The pilot completed his last biennial flight review on October 22, 1999, in the accident airplane.

One of the pilot-rated witnesses, who saw the airplane fly-by at the airport, was the pilot's flight instructor. According to the flight instructor, the pilot was receiving instruction toward his instrument rating in the same make and model as the accident airplane.

AIRCRAFT INFORMATION

A review of the maintenance records revealed that the 1964-model airplane (serial number TC-625) underwent its last annual inspection on August 2, 1999, at an aircraft total time of 4,404.3 hours. At that time, both the left and right Teledyne Continental IO-520-E engines had accumulated 937.4 hours since a major overhaul. On December 14, 1999, an EnviroSystems air conditioning system was installed in the airplane and a new empty weight and balance was calculated.

On January 13, 2000, the airplane was modified in accordance with a Micro Aerodynamics Inc., Supplemental Type Certificate (STC#SA5789NM) by installing strakes near the engine nacelles, and vortex generators on the upper surface of both wings and both sides of the rudder. According to the STC manufacturer, the installation of the vortex generators and the strakes "results in improved performance and control authority at low airspeeds and high angles of attack." One of the results of installing the vortex generators on the wings is a lower stall speed. The STC requires that the airplane be test flown after the modification to "determine at what point stall warning actuates." The STC states that the stall warning horn should "actuate at 7 to 9 mph ahead of the full stall, although from 5 to 10 mph ahead of the stall will meet FAA requirements." It could not be determined from the maintenance records whether the stall warning horn had been tested after the installation of the vortex generators and the strakes.

During an interview with the pilot's flight instructor, he mentioned that he test flew the airplane for an hour after the vortex generators were installed. He stated that he did not fully stall the airplane, but rather slowed the airplane until the stall warning horn activated. The flight instructor added that he had not practiced stalls with the pilot after the vortex generators were installed. The flight instructor indicated that the pilot had been practicing instrument maneuvers and "had not practiced stalls recently." He added that he and the pilot had never practiced full stalls in the accident airplane.

METEOROLOGICAL INFORMATION

At 1653, the weather observation facility at the Corsicana Municipal Airport, located 27 nautical miles north-northeast of the accident site, reported the wind from 140 degrees at 10 knots, visibility 10 statute miles, a few clouds at 2,700 feet agl and an overcast ceiling at 3,300 feet agl, temperature 54 degrees Fahrenheit, dew point 29 degrees Fahrenheit, and altimeter

setting of 29.99 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest in a pasture, located 1.5 miles southeast of the airport, on a magnetic heading of 038 degrees. There were no ground scars in the pasture except for the scars located beneath the airplane. The airplane came to rest upright, with no leading edge damage. The left wing displayed crushing from the bottom side up. The fuselage, and the left and right wings sustained extensive fire damage. The landing gear actuator was found in the extended position, and the flap actuators were found in the approach flap position. Flight control continuity was confirmed from the flight controls to the cockpit area. The instrument panel was destroyed by fire damage.

The engines were still attached to their respective mounts and firewalls, and had sustained fire damage. Engine control continuity for both engines was confirmed to the cockpit area; however, the cockpit engine controls were melted. The throttle arms, located at the throttle body, for both the left and right engines were found in the full open position. The mixture arms, located on the fuel metering unit, for both the left and right engines were found in the mid-range position. The throttle body on the left engine was in position, but was separated from the engine. The throttle body on the right engine was in position.

The propellers were attached to the engines, and four of the six propeller blades were found melted. One of the propeller blades on the right engine remained intact and displayed heavy leading edge rubbing. The propeller blade was loose in the propeller hub. One of the propeller blades on the left engine was found attached to the propeller hub; however, the blade was separated approximately 14 inches from the propeller hub. The fracture surface of that blade displayed signatures consistent with an overload failure. The propeller governor arms for both propellers were found in the 3/4-advanced position.

The engines were sent to the Teledyne Continental Motors factory in Mobile, Alabama for a teardown examination.

PATHELOGICAL INFORMATION

An autopsy of the pilot was performed at the Dallas County Medical Examiner's office. According to the medical examiner, the pilot died as a result of "blunt force injuries sustained as the pilot of a small aircraft which crashed." Toxicological tests for alcohol, drugs, cyanide, and carbon monoxide were negative.

TESTS AND RESEARCH

The engines were examined on April 27, 2000, at the manufacturer's facility under the supervision of an FAA inspector. Both engines "exhibited normal operational signatures throughout, with the exception of the post accident fire damage." According to the

manufacturer and the FAA inspector, neither engine exhibited any pre-accident condition that would have resulted in an operational problem.

ADDITIONAL INFORMATION

The aircraft wreckage was released to the owner's representative.

Pilot Information

Certificate:	Private	**Age:**	39,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	October 19, 1998
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	726 hours (Total, all aircraft), 396 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N3MT
Model/Series:	95-B55 95-B55	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	TC-625
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	August 2, 1999 Annual	**Certified Max Gross Wt.:**	5100 lbs
Time Since Last Inspection:	90 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	4495 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed	**Engine Model/Series:**	IO-520-E2B
Registered Owner:	TIBOR J. BICZO JR.	**Rated Power:**	300 Horsepower
Operator:		**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:	CRS ,544 ft msl	**Distance from Accident Site:**	27 Nautical Miles
Observation Time:	17:53 Local	**Direction from Accident Site:**	20°
Lowest Cloud Condition:	Scattered / 2700 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Overcast / 3300 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	12°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	AUSTIN (BSM)	**Type of Flight Plan Filed:**	None
Destination:	(LXY)	**Type of Clearance:**	VFR
Departure Time:	16:46 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	MEXIA-LIMESTONE COUNTY LXY	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	1 Fatal	**Latitude, Longitude:**	31.670053,-96.480796(est)

Administrative Information

Investigator In Charge (IIC):	Lupino, Nicole
Additional Participating Persons:	LLOYD KELLEY; DALLAS , TX
Report Date:	January 24, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=48505