Aviation Investigation Final Report

Location:	Midland, Texas	**Accident Number:**	CEN18FA204
Date & Time:	May 31, 2018, 19:20 Local	**Registration:**	N670SR
Aircraft:	Cirrus SR22	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of control in flight	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The student pilot and passenger were departing on a personal flight in the student pilot's airplane. Witnesses saw the airplane climb to about 200 ft above the runway at a slow airspeed, stall, and descend in a right turn until impact with terrain. According to the pilot's wife, he regularly flew the airplane, often with passengers. No pilot logbooks or records were found and the student's flight experience could not be determined. Examination of the airplane revealed no mechanical malfunctions or anomalies that would have precluded normal operation. Given the atmospheric conditions, the density altitude about the time of the accident was 6,660 ft mean sea level (msl).

Probable Cause and Findings

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

An inadvertent stall, resulting in an uncontrollable descent and impact with terrain. Contributing to the accident was the high density altitude.

Findings

Personnel issues	Incorrect action performance - Passenger
Personnel issues	Qualification/certification - Pilot
Environmental issues	High density altitude - Effect on operation

Factual Information

History of Flight

Initial climb	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On May 31, 2018, about 1920 central daylight time, a Cirrus Design Corp. SR22, N670SR, was destroyed when it impacted terrain shortly after takeoff from Midland International Air and Space Port Airport (MAF), Midland, Texas. The student pilot and passenger were fatally injured. The airplane was registered to and was being operated by JMC Ranches, LLC, Midland, Texas, under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed at the accident site at the time of the accident. The personal flight was originating at the time of the accident and was destined for Sierra Blanca Regional Airport (SRR), Ruidoso, New Mexico.

Two corporate pilots were standing on the ramp outside the fixed base operator and saw the accident airplane during its initial climb. They said that the airplane climbed to about 200 ft at a slow airspeed then stall. The right wing dropped, and the airplane descended in a right turn until impact with terrain behind the Commemorative Air Force's American Airpower Heritage Museum. A post-impact fire occurred.

Pilot Information

Certificate:	Student	**Age:**	39,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	April 1, 2013
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 192 hours (Total, all aircraft), 92 hours (Total, this make and model)		

The 39-year-old pilot held a student pilot certificate. His most recent third-class Federal Aviation Administration (FAA) airman medical certificate was issued on dated April 1, 2013.

According to the pilot's wife, the pilot had a horse training business, and he regularly flew the accident airplane between MAF and SRR, often with passengers.

The pilot's former flight instructor stated that the pilot had taken a 3 to 5 year "hiatus" from flying. He had flown with the pilot in a Cessna 172 from December 2016 to April 2017. When he last flew with the pilot, he estimated the pilot had accrued about 100 total hours of flight experience. The instructor stated

that he never flew with the pilot in the accident airplane.

Aircraft and Owner/Operator Information

Aircraft Make:	Cirrus	**Registration:**	N670SR
Model/Series:	SR22	**Aircraft Category:**	Airplane
Year of Manufacture:	2007	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2863
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	December 20, 2017 Annual	**Certified Max Gross Wt.:**	3044 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	875 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed	**Engine Model/Series:**	IO-550-N
Registered Owner:	On file	**Rated Power:**	
Operator:	On file	**Operating Certificate(s) Held:**	None

The accident airplane, serial number 2863, was manufactured in 2007. It was powered by a Continental IO-550-N 310-horsepower reciprocating engine, serial number 691467, which drove a Hartzell 3-bladed, composite, constant-speed propeller (model number PHC-33YF-1N, serial number FP6210B.

According to the airplane maintenance records, both the airframe and engine received annual inspections on December 20, 2017, at a total time of 875.1 hours. At that time, the recording tachometer read 847.6 hours.

FAA registration information indicates that the airplane was registered to JMC Ranches, LLC, on January 11, 2018. The pilot owned JMC Ranches, LLC.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KMAF,2872 ft msl	**Distance from Accident Site:**	
Observation Time:	18:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	150°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	29.78 inches Hg	**Temperature/Dew Point:**	41°C / 4°C
Precipitation and Obscuration:			
Departure Point:	Midland, TX (KMAF)	**Type of Flight Plan Filed:**	Unknown
Destination:	Ruidoso, NM (KSRR)	**Type of Clearance:**	VFR
Departure Time:	19:20 Local	**Type of Airspace:**	Class D

The MAF automated weather observation at 1853 included wind from 150° at 9 knots; 10 miles visibility, clear sky, temperature 41°C, dew point 4°C, and an altimeter setting of 29.78 inches of mercury.

The 1952 observation included wind from 160° at 5 knots; temperature 40°C, dew point 4°C, and an altimeter setting of 29.78 inches of mercury.

Given the atmospheric conditions, the density altitude was 6,660 ft above mean sea level (msl) about the time of the accident.

Airport Information

Airport:	Midland International KMAF	**Runway Surface Type:**	Asphalt
Airport Elevation:	2872 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	16R	**IFR Approach:**	None
Runway Length/Width:	9501 ft / 159 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	31,-102(est)

The on-scene examination of the wreckage revealed a 53-ft long ground scar aligned on a magnetic heading of 270°, that led to the main wreckage. All aircraft components were accounted for, and there was no evidence of in-flight airframe, engine, or flight control malfunction or failure.

Medical and Pathological Information

The Tarrant County Medical Examiner, Fort Worth, Texas, performed an autopsy of the pilot. According to the report, the cause of death was "multiple blunt force injuries."

The FAA's Bioaeronautical Science Research Laboratory, Oklahoma City, Oklahoma, performed toxicological testing on specimens of the pilot. No carboxyhemoglobin was detected in blood, and no ethanol was detected in vitreous. Tamsulosin was detected in cavity blood and in liver tissue. According to FAA's Forensic Toxicology's WebDrugs, tamsulosin is an alpha blocker used in the symptomatic treatment of benign prostatic hyperplasia. It is not considered to be impairing.

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	Corey L Wehmeyer; FAA Flight Standards District Office; Lubbock, TX Gordon D Morris; FAA Flight Standards District Office; Lubbock, TX Brad Miller; Cirrus Design; Duluth, MN Chris Lang; Continental Motors; Mobile, AL
Original Publish Date:	November 6, 2019
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=97374