National Transportation Safety Board
Aviation Accident Preliminary Report

Location:	MONROE, GA	**Accident Number:**	ERA19LA221
Date & Time:	07/09/2019, 1730 EDT	**Registration:**	UNREG
Aircraft:	HI-MAX HI-MAX	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

On July 9, 2019, about 1730 eastern daylight time, an unregistered experimental, amateur built Hi-Max airplane, was destroyed when it collided with terrain shortly after takeoff from Monroe-Walton County Airport (D73), Monroe, Georgia. The commercial pilot was fatally injured. Visual meteorological conditions prevailed, and no flight plan was filed for the local flight. The flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91. The flight originated from D73 at 1725.

According to the owner, he purchased the airplane about 1 month before the accident and stored it at D73. The owner subsequently asked the pilot if he would be willing to inspect and test fly the airplane. The pilot agreed and performed a brief inspection of the airplane before a test flight that lasted about 10 minutes. Since the owner was not a licensed pilot, he inquired about obtaining some flight training. The airplane remained parked for about 3 weeks before the owner attempted to start the airplane again; but the engine did not start. After multiple attempts to start the engine the accident pilot offered to have his mechanic troubleshoot the issue. The owner gave the keys to the accident pilot, and on the following day was notified that the airplane was involved in an accident.

According to the mechanic that assisted the pilot prior to the flight, he performed a routine oil change on the airplane prior to the accident. He witnessed the pilot install a new battery, and helped the pilot start the engine. After the engine was started the mechanic assisted the pilot with reinstalling the engine cowing and watched as the pilot taxied the airplane around the taxiway and runway. He continued to watch as the airplane took off and made a normal left turn to return to airport. During the left turn, the airplane went out of his sight due to the terrain and he heard the airplane impact the ground.

A witness reported that he saw a low flying airplane at a high rate of speed over a house make a "hard" left banking turn before it disappeared behind the trees. He heard a loud "boom" and subsequently drove to the airport, where he discovered the airplane positioned sideways between the fence and a dirt pile.

The pilot held a commercial pilot certificate with ratings for airplane single, multi-engine land and rotorcraft-helicopter. He held a Federal Aviation Administration (FAA) second-class

medical certificate, issued June 14, 2018. At the time of the medical examination, the pilot reported 3,000 total hours of flight experience and 200 hours of flight experience within the 6 months prior to the medical application.

The experimental airplane was constructed from wood truss with plywood gussets and covered with doped aircraft fabric. It was equipped with a Subaru EA 81 automotive engine.

During an interview, a representative of the kit manufacturer stated that the Subaru EA 81 engine was "too heavy" for the HI-MAX model and required the use of 20-30 pounds of ballast in the back to offset the extra weight of the EA 81 engine. During the examination of the fuselage no ballast were discovered.

The pilot performed the most recent maintenance on the airplane which occurred on July 8 and 9, 2019. Review of the pilot's notes revealed a list of parts that were replaced, which included, "battery, oil filter, air filter, fuel filter, and four quarts of 10W-40 oil." In addition, he cleaned and gapped spark plugs, inspected and lubed all flight control points and connections, packed wheel bearings, and adjusted the rudder control.

Examination of the airplane by an FAA inspector revealed that it came to rest on the airport field next to the perimeter fence. All four corners of the airplane were located at the accident site and flight control continuity was established to all flight controls and surfaces.

Examination of the engine and the propeller revealed that they were impact damaged. Examination of the carburetor revealed no debris and no residual fuel found. Impact damage was observed on the throttle assembly. The sparkplugs were removed and were labeled autolite 3923; no damage or fouling was observed. The engine was hand cranked to check for compression on all four cylinders. All four cylinders attained thumb compression and no anomalies were noted. Examination of the propeller revealed all three composite blades were fragmented and sheared from the propeller hub. The aluminum spinner was impact damaged and crushed.

Aircraft and Owner/Operator Information

Aircraft Make:	HI-MAX	**Registration:**	UNREG
Model/Series:	HI-MAX	**Aircraft Category:**	Airplane
Amateur Built:	Yes		
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	D73, 875 ft msl	**Observation Time:**	1730 EDT
Distance from Accident Site:	0 Nautical Miles	**Temperature/Dew Point:**	30°C / 23°C
Lowest Cloud Condition:	Clear	**Wind Speed/Gusts, Direction:**	7 knots / , 70°
Lowest Ceiling:	Overcast / 110 ft agl	**Visibility:**	
Altimeter Setting:	29.99 inches Hg	**Type of Flight Plan Filed:**	None
Departure Point:	Monroe, GA (D73)	**Destination:**	Monroe, GA (D73)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	33.782500, -83.692778 (est)

Administrative Information

Investigator In Charge (IIC):	Eric Alleyne
Additional Participating Persons:	Shane Olsen; FAA/FSDO; College Park, GA
Note:	The NTSB did not travel to the scene of this accident.