



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Holy Hill, South Carolina	Accident Number:	ERA23LA329
Date & Time:	August 9, 2023, 19:30 Local	Registration:	N1624Z
Aircraft:	EIPPER FORMANCE INC MXII	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the accident flight was his first flight in this make and model airplane, and he planned to complete a few high-speed taxi runs before deciding to takeoff. During the first high-speed taxi attempt, the pilot lifted the nose wheel up, and after riding on the rear wheels he increased engine power to “slightly lift off”; however, the airplane quickly climbed to 30 or 40 feet above ground level within a few seconds. Subsequently, the pilot reduced power to land, but the airplane immediately entered an aerodynamic stall and rolled to the left. The airplane continued to descend and impacted a hangar which resulted in substantial damage to the fuselage and wings.

The pilot reported that there were no preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation. He further added that he was unfamiliar with the airplane.

Probable Cause and Findings

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

The pilot’s exceedance of the critical angle of attack during the initial climb, which resulted in an aerodynamic stall at low altitude and a collision with a hangar. Contributing to the accident was the pilot’s lack of experience in the accident make and model airplane.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Angle of attack - Capability exceeded
Personnel issues	Total experience w/ equipment - Pilot

Factual Information

History of Flight

Initial climb	Aerodynamic stall/spin
Initial climb	Loss of control in flight (Defining event)
Initial climb	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	45,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	April 30, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 21, 2022
Flight Time:	243 hours (Total, all aircraft), 0 hours (Total, this make and model), 180 hours (Pilot In Command, all aircraft), 32 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	EIPPER FORMANCE INC	Registration:	N1624Z
Model/Series:	MXII NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	2007	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	1764
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	525 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	ROTAX
ELT:	Not installed	Engine Model/Series:	582
Registered Owner:	On file	Rated Power:	50 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:	OGB,197 ft msl	Distance from Accident Site:	25 Nautical Miles
Observation Time:	19:53 Local	Direction from Accident Site:	293°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	28°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Holy Hill, SC	Type of Flight Plan Filed:	None
Destination:	Holy Hill, SC	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	HOLLY HILL 5J5	Runway Surface Type:	Grass/turf
Airport Elevation:	96 ft msl	Runway Surface Condition:	Dry
Runway Used:	4-22	IFR Approach:	None
Runway Length/Width:	3900 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	33.30183,-80.391977

Preventing Similar Accidents

Understanding Flight Experience (SA-040)

The Problem

Aircraft have different flight characteristics, performance, and systems. Pilots may have many hours of experience, but their experience specific to the aircraft make/model and/or equipment they are flying may be limited.

Although Federal Aviation Administration (FAA) regulations allow pilots to operate aircraft that are designated by a specific category and class, differences among different types of aircraft within the same category and class can be significant. Even if operating a specific type of aircraft is allowed by regulations, it does not mean the practice is safe.

What can you do?

- Obtain the necessary training from a flight instructor experienced in the aircraft that you plan to fly so that you understand the flight characteristics and emergency procedures for that aircraft. Meeting the minimum requirements does not mean that you are proficient.
- Obtain refresher training if you have not flown for a long period; long periods of no flying, even for high-time pilots, can have an adverse impact on your ability to respond to unusual situations and emergencies.
- Seek out a qualified test pilot to assist in flight testing homebuilt aircraft you are not familiar with.
- Seek out instruction for advanced avionics and systems. Identical make-and-model aircraft can have considerably different cockpit panels.

See <https://www.nts.gov/Advocacy/safety-alerts/Documents/SA-040.pdf> for additional resources.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

Administrative Information

Investigator In Charge (IIC):	Gerhardt, Adam
Additional Participating Persons:	Todd Clamp; FAA/FSDO; Columbia, SC
Original Publish Date:	December 13, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192837

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).