



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Coral Gables, Florida	Accident Number:	ERA23LA283
Date & Time:	July 4, 2023, 09:15 Local	Registration:	N147JL
Aircraft:	Airborne Edge-X	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

After performing a preflight inspection of the weight-shift-control aircraft, the pilot departed on a personal flight. After 30 minutes of flying, the engine began to surge. The pilot attempted to regain full engine power; however, the engine continued surging, and the pilot chose to conduct a forced landing to a golf course. During the landing, the aircraft touched down in a grass area, continued into a rocky area, and came to rest inverted in a pond, resulting in substantial damage to the fuselage.

Postaccident examination of the two-stroke engine found water throughout the engine, likely from being submerged in the pond. No mechanical anomalies were noted with the engine that would have precluded normal operation; however, a white clay and white powder substance was noted throughout the fuel system. It is possible that the substance partially occluded the fuel lines, which resulted in the engine surging; however, it could not be determined when the contamination occurred; therefore, the reason for the partial loss of engine power could not be determined.

Probable Cause and Findings

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

A partial loss of engine power for reasons that could not be determined.

Findings

Aircraft	(general) - Unknown/Not determined
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Factual Information

History of Flight

Maneuvering	Unknown or undetermined (Defining event)
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On July 4, 2023, at 0915 eastern daylight time, an Airborne Edge-X, N147JL, was substantially damaged when it was involved in an accident near Coral Gables, Florida. The sport pilot and passenger sustained minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to the pilot, after performing a preflight inspection of the weight-shift-control aircraft, he departed Miami Homestead General Aviation Airport (X51), Homestead, Florida, around 0830. After 30 minutes of flying without anomaly, the engine began to “sputter,” then “race up to 6,000 rpm for a few seconds,” and repeat the acceleration/deceleration cycle. The cycle resulted in the aircraft climbing and descending in unison with the uncommanded acceleration and deceleration of the engine. The pilot attempted to regain full engine power; however, the engine continued to “sputter” and accelerate. After about 10 minutes of circling a park hoping the engine would stabilize, he noted no options for a forced landing site and flew south along the coastline toward a golf course. The pilot lined up to land on the golf course and, as the aircraft cleared the final line of trees, the pilot took his foot off the throttle and the engine “immediately stalled.” He landed the aircraft, “but it had too much speed,” and to avoid a marsh area the pilot raised the nose and glided over the marsh. Then, the aircraft touched down in a grass area, continued into a rocky area, and came to rest inverted in a pond.

Examination of the aircraft revealed substantial damage to the wings and fuselage. The fuel tank was damaged and filled with pond water.

Postaccident examination of the two-stroke engine by a Federal Aviation Administration inspector revealed that both carburetors were contaminated with water similar to the pond water, as well as a white powdery substance and white clay substance. Disassembly of both carburetors revealed no mechanical anomalies; however the internal jet filters were contaminated with a white powdery substance. Examination and disassembly of the fuel metering distribution system found about 10 drops of fuel and no contamination was noted. The diaphragm seals were not damaged and no anomalies were noted. The fuel lines were not obstructed and the fuel filter located on the fuel line between the fuel metering distribution system and the fuel tank did not contain fuel; however, it contained a white substance.

Review of the maintenance records indicated that a condition inspection was performed on March 23, 2023, at a total time of 498.9 hours. No anomalies were noted with the engine at that time.

Pilot Information

Certificate:	Sport Pilot; Student	Age:	65, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	Glider	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Sport pilot None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	384 hours (Total, all aircraft), 34 hours (Total, this make and model), 384 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Airborne	Registration:	N147JL
Model/Series:	Edge-X	Aircraft Category:	Weight-shift
Year of Manufacture:	2004	Amateur Built:	Yes
Airworthiness Certificate:	Experimental light sport (Special)	Serial Number:	001
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	March 4, 2023 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:	35 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	534 Hrs at time of accident	Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	582 DCDI
Registered Owner:	On file	Rated Power:	65 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:	TMB,6 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	08:53 Local	Direction from Accident Site:	271°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	Unknown / Unknown
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / Unknown
Altimeter Setting:	30.06 inches Hg	Temperature/Dew Point:	0°C / 0°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Coral Gables, FL	Type of Flight Plan Filed:	None
Destination:	Coral Gables, FL	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	25.639523,-80.290742

Administrative Information

Investigator In Charge (IIC):	Kemner, Heidi
Additional Participating Persons:	Juan Garcia; FAA/FSDO; Miramar, FL
Original Publish Date:	June 26, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192512

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](#).