



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Pensacola, FL	<b>Accident Number:</b>	ERA18FA235
<b>Date &amp; Time:</b>	08/27/2018, 1215 CDT	<b>Registration:</b>	N186AT
<b>Aircraft:</b>	AIRTIME CYGNET	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Instructional		

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## Analysis

Following a 1-year period without flying, the student pilot completed two flights in his amphibious weight-shift-control aircraft with a flight instructor before departing on his first solo flight. The instructor reported that, during the two instructional flights, the student completed takeoffs and landings, steep turns, stalls, and spiral recovery "perfectly." After exiting the aircraft, the instructor told the student to perform several water landings, with traffic patterns 500 ft above ground level (agl). The student departed and, on the downwind leg, the aircraft entered a left descending spiral that continued until water impact. Examination of the engine and airframe revealed no preimpact mechanical failures or anomalies that would have precluded normal operation.

## Probable Cause and Findings

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

The student pilot's loss of aircraft control for undetermined reasons.

## Findings

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<b>Personnel issues</b>	Aircraft control - Pilot (Cause) Physical fitness - Pilot
<b>Not determined</b>	Not determined - Unknown/Not determined (Cause)

# Factual Information

## History of Flight

Maneuvering	Loss of control in flight (Defining event) Aerodynamic stall/spin
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On August 27, 2018, about 1215 central daylight time, an Airtime Aircraft, Inc., Cygnet weight-shift-controlled aircraft, N186AT, was substantially damaged when it was involved in an accident near Pensacola Beach, Florida. The student pilot was fatally injured. The aircraft was operated as a Title 14 Code of Federal Regulations Part 91 instructional flight that departed about 1205.

The pilot, who also owned the accident aircraft had completed his first flight in about 1 year the day before the accident; the flight was conducted with an instructor. The instructor stated that the pilot flew very well during the flight. The pilot flew with the instructor again the day of the accident, during which they flew about 2 hours and performed over 20 touch-and-go landings in the water of Santa Rosa Sound, an inland waterway north of Pensacola Beach. They also performed stalls, steep turns, and spiral recovery. The instructor stated that the pilot was flying "perfectly" and was ready for his first solo flight. They landed near the shore and the flight instructor got out of the aircraft. He told the pilot to complete several left rectangular patterns at 500 ft above ground level (agl) with subsequent water landings and takeoffs. He also reminded the pilot that he had "200 less pounds in the back seat."

The instructor watched the aircraft depart westbound, perpendicular to the shore, and stated that the takeoff and climb appeared normal and the engine power settings sounded normal. However, as the airplane became established on downwind, about 400 to 500 ft agl, the instructor noticed the left wing drop rapidly to about 35° followed by a quick right wing drop to about 60° before the aircraft turned back to the left and progressed into a left descending spiral that continued until it impacted the water.

## Pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	53, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	None None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	08/10/2016
<b>Flight Time:</b>	(Estimated) , 33 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AIRTIME	<b>Registration:</b>	N186AT
<b>Model/Series:</b>	CYGNET	<b>Aircraft Category:</b>	Weight-Shift
<b>Year of Manufacture:</b>	2016	<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Special Light-Sport	<b>Serial Number:</b>	111
<b>Landing Gear Type:</b>	Amphibian	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	1280 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	174 Hours at time of accident	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	912
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	100 hp
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

According to Federal Aviation Administration (FAA) records, the two-place, weight-shift control aircraft was issued a special airworthiness certificate in the light sport category on June 1, 2016. The aircraft was equipped with floats for water operations and retractable tricycle landing gear for land operations.

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	NPA, 120 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	1219 CDT	Direction from Accident Site:	270°
Lowest Cloud Condition:	Scattered / 3200 ft agl	Visibility	10 Miles
Lowest Ceiling:	Broken / 25000 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.11 inches Hg	Temperature/Dew Point:	32° C / 22° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pensacola, FL	Type of Flight Plan Filed:	None
Destination:	Pensacola, FL	Type of Clearance:	None
Departure Time:	1200 CDT	Type of Airspace:	Class G

## 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:	30.363056, -87.058611 (est)

The wreckage floated about 1 mile from the accident location before it was recovered from the bay. The left wing strut and the left leading edge tube were fractured and bent in several locations, the fuselage was deformed, and the left float was ruptured. The right float was intact and kept the aircraft afloat. All structural components and flight control cables were accounted for during the examination. The haul back cable remained attached and all tension wires and control wires were mounted in their respective locations. The control bar remained intact and connected to the keel post and functioned as designed.

The engine remained attached to the fuselage and all three propeller blades were uniformly broken off 5 inches from the propeller hub. The carburetors remained attached and exhibited no anomalies. The spark plugs remained secured to their respective cylinders. The spark plugs were removed and examined and displayed minimal wear when compared to the Champion Check-A-Plug chart. Thumb compression and suction on all cylinders was confirmed when the engine was rotated at the propeller hub. All valves, pushrods, and springs operated normally, and rotation was smooth, with no noticeable abnormal noise or friction noted. The pistons

appeared well-lubricated and there was no interior engine damage observed. The engine and airframe revealed no preimpact mechanical failures or anomalies that would have precluded normal operation.

## Medical And Pathological Information

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According to the autopsy performed by the State of Florida, Office of the Medical Examiner, District I, the cause of death was multiple blunt force injuries. In addition, hypertensive and atherosclerotic heart disease was identified. The heart weighed 610 grams (average for a 260-lb man is 425 gm with a range of 322-561 gm). However, there was no description of wall thickness or chamber size in the autopsy report. The left anterior descending coronary artery was described as 100% occluded by atherosclerosis, and the circumflex artery was 40-50% stenosed (the right coronary artery was widely patent). There was no description of gross scarring of the myocardium, but no microscopy of the heart was performed. No other significant natural disease was described.

Toxicological testing was performed by the FAA Forensic Sciences Research Laboratory. Testing identified naproxen, an over-the-counter analgesic that is not impairing. All other results were negative for carbon monoxide, ethanol, and all tested-for drugs and their metabolites.

## Administrative Information

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<b>Investigator In Charge (IIC):</b>	Lawrence A Mccarter	<b>Report Date:</b>	06/03/2020
<b>Additional Participating Persons:</b>	Nina McBride; FAA FSDO; Birmingham, AL Colin J Bean; Airtime Aircraft; Navarre, FL		
<b>Publish Date:</b>	06/03/2020		
<b>Note:</b>	The NTSB traveled to the scene of this accident.		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=98167">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=98167</a>		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).