



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Minneola, FL	<b>Accident Number:</b>	ERA16LA086
<b>Date &amp; Time:</b>	01/09/2016, 1600 EST	<b>Registration:</b>	N72MT
<b>Aircraft:</b>	WAYLAND JOHN H AVID MARK IV	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (total)	<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The sport pilot of the experimental, amateur-built, light sport airplane performed a takeoff and initiated a steep, left, crosswind turn to avoid horses off the end of the runway. About 300 ft above the ground, he smelled "burning wires" and thought he saw a "wisp of smoke." The engine "sputtered then died." The left wing stalled, the airplane rolled inverted, and entered a downward spiral. The airplane collided with trees and terrain before coming to rest, inverted, in a grassy field. Examination of the airframe and engine found no evidence of a mechanical failure or malfunction that would have prevented normal operation. The pilot received his sport pilot certificate about 4 months before the accident and had accumulated about 120 hours of total flight time at the time of the accident. It is likely that, following the total loss of engine power, the pilot failed to reduce the airplane's angle of attack either sufficiently or quickly enough to prevent an aerodynamic stall/spin.

## Probable Cause and Findings

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

A total loss of engine power for reasons that could not be determined because postaccident examination revealed no anomalies that would have precluded normal operation. Contributing to the accident was the pilot's exceedance of the airplane's critical angle of attack during the crosswind turn, which resulted in an aerodynamic stall/spin.

## Findings

<b>Aircraft</b>	Angle of attack - Not attained/maintained (Factor)
<b>Personnel issues</b>	Aircraft control - Pilot (Factor)
<b>Not determined</b>	Not determined - Unknown/Not determined (Cause)

## Factual Information

On January 9, 2016, about 1600 eastern standard time, an experimental amateur-built Avid Mark IV, N72MT, was substantially damaged following a forced landing after takeoff from Florida Flying Gators Ultralight Flightpark (3FD4), Minneola, Florida. The sport pilot was seriously injured. The airplane was privately owned and operated under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Day, visual meteorological conditions prevailed, and no flight plan was filed. The local flight was originating at the time of the accident.

The pilot reported that, after takeoff, he turned onto the crosswind leg of the traffic pattern. He performed a steep turn after takeoff to avoid horses off the end of the runway. He then noticed the smell of "burning wires" and "may have seen a wisp of smoke." At 300 feet above the ground, and while still climbing, the engine "sputtered, then died." He made a radio call that he was returning to the runway. The left wing then stalled and the airplane rolled inverted and entered a downward spiral. The airplane collided with two trees during the descent before colliding with the terrain. The airplane came to rest in a grassy area, inverted.

Inspectors with the Federal Aviation Administration (FAA) responded to the accident site and examined the wreckage. They observed structural damage to fuselage, empennage, and both wings. An FAA airworthiness inspector examined the engine and found no evidence of a mechanical failure or malfunction. There were no arcing or burn signatures on the engine's electrical wiring or connectors. A postaccident test run of the engine could not be performed due to impact damage.

The pilot received his sport pilot certificate on September 2, 2015, after taking a two-week training course. He reported 120 hours of total flight time, including 100 hours as pilot-in-command. He also reported 65 hours in the accident airplane make and model, all as pilot-in-command. He stated that, after the accident, he took additional lessons with his original flight instructor to practice emergency procedures, stalls, and stall recovery.

## History of Flight

<b>Initial climb</b>	Loss of engine power (total) (Defining event) Loss of control in flight
<b>Uncontrolled descent</b>	Collision with terr/obj (non-CFIT)

## Pilot Information

<b>Certificate:</b>	Sport Pilot	<b>Age:</b>	50, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Sport Pilot None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	03/01/2016
<b>Flight Time:</b>	120 hours (Total, all aircraft), 65 hours (Total, this make and model), 100 hours (Pilot In Command, all aircraft), 10 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	WAYLAND JOHN H	<b>Registration:</b>	N72MT
<b>Model/Series:</b>	AVID MARK IV UNDESIGNAT	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2000	<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental	<b>Serial Number:</b>	1431D
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Condition	<b>Certified Max Gross Wt.:</b>	1100 lbs
<b>Time Since Last Inspection:</b>	50 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	350 Hours at time of accident	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	582
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	65 hp
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	LEE, 75 ft msl	Distance from Accident Site:	11 Nautical Miles
Observation Time:	2053 UTC	Direction from Accident Site:	360°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.85 inches Hg	Temperature/Dew Point:	21° C / 18° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Minneola, FL (3FD4)	Type of Flight Plan Filed:	None
Destination:	Minneola, FL (3FD4)	Type of Clearance:	None
Departure Time:	1600 EST	Type of Airspace:	Class E

## Airport Information

Airport:	Florida Flying Gators (3FD4)	Runway Surface Type:	N/A
Airport Elevation:	30 ft	Runway Surface Condition:	
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	28.627778, -81.802778 (est)

## Administrative Information

Investigator In Charge (IIC):	Ralph E Hicks	Report Date:	05/23/2017
Additional Participating Persons:	Larry Hammerbeck; FAA/FSDO; Orlando, FL		
Publish Date:	05/23/2017		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	<a href="http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=92555">http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=92555</a>		

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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](#).