



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Oshkosh, WI	<b>Accident Number:</b>	CEN16LA293
<b>Date &amp; Time:</b>	07/30/2016, 1147 CDT	<b>Registration:</b>	N6271X
<b>Aircraft:</b>	BOAM LARRY RANS S 7	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The sport pilot reported that during taxi before taking off for the airshow, he was trying to get the airplane set up for takeoff. Shortly after he began his takeoff roll and as he rotated the airplane, the airplane's nose pitched up into a high attitude. He applied forward pressure to the control stick, and the airplane began to drift to the left. Because the left side of the runway was bordered with airshow spectators, the pilot made an abrupt turn to the right, which resulted in an aerodynamic stall. Subsequently, the airplane impacted terrain on the west side of the runway and sustained substantial damage to the wing struts and fuselage.

The pilot stated that he felt rushed and anxious given the number of airplanes trying to land and take off.

Postaccident examination of the airplane revealed flight control continuity, and no preimpact mechanical failures or malfunctions were identified that would have precluded normal operation. Although the aft baggage compartment contained 10 lbs of baggage more than the maximum limit, according to weight and balance calculations, the airplane's takeoff weight was below the maximum, and the aft center of gravity was within normal limits.

The pilot had been diagnosed with Crohn's disease, low back pain, insomnia, and Parkinson's disease and was taking sleep-inducing medications at the time of the accident. Given the circumstances of the accident and the pilot's ability to recall events including the crash itself, it is unlikely that he suffered a sudden period of sleep induced by the medications. Further, it could not be determined if the pilot's medical issues contributed to the accident.

## Probable Cause and Findings

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

The pilot's failure to maintain airplane control on takeoff, which resulted in his remedial action to induce an aerodynamic stall and the subsequent impact with terrain.

## Findings

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Personnel issues

Aircraft control - Pilot (Cause)

## Factual Information

On July 30, 2016, about 1147 central daylight time, a Rans S7 airplane, N6271X, impacted terrain shortly after takeoff from the Wittman Regional Airport (KOSH), Oshkosh, Wisconsin. The airplane sustained substantial damage to the wing struts and fuselage, and the sport pilot was not injured. The airplane was privately registered and operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight. Day visual meteorological conditions prevailed for the flight, and no flight plan was filed.

The pilot stated that after camping for a few days at the Experimental Aircraft Association's AirVenture, he decided to head to Ames, Iowa. He finished packing and preflighted the outside of the airplane, but not the inside. After the preflight and engine start sequence, he ground maneuvered his airplane to indicate he was ready to depart, and a flight line marshal came to his airplane to escort him out of the parking area. The pilot stated that during taxi, the tailwheel of the airplane seemed to have some trouble tracking, giving the brakes "a real work out, and causing his airplane to run slower than the other aircraft." The pilot stated that while taxiing, he was also trying to get the airplane set-up for takeoff.

The pilot was cleared for takeoff from runway 36, and he accelerated the engine to full throttle. He reported that during the takeoff roll, "the tail came up, the gear got soft," and he put back pressure on the stick. He reported that "something was very wrong" as the nose pitched up into a high attitude that was indicative of a stall. The pilot pushed forward on the stick, and the airplane began to drift left. He saw the people on the flight line, airplanes on the taxiway and made the decision to make an abrupt turn to the right to cause an aerodynamic stall. The airplane impacted the ground on the west side of the runway.

The pilot reported feeling very rushed and anxious because of all the timing issues given the number of people trying to land and takeoff. He reported that it would have been helpful to complete an "in cabin" preflight checklist prior to takeoff.

Examination of the airplane after the accident by the National Transportation Safety Board (NTSB) investigator-in-charge and a Federal Aviation Administration (FAA) inspector revealed flight control continuity was established to all controls. The elevator trim was found in the takeoff position. All items in the airplane were weighed, and the airplane weight and balance was calculated with a takeoff weight of 1,049 lbs; the maximum takeoff weight was 1,200 lbs. The airplane center of gravity was 77.8 inches; the airplane's center of gravity envelope was 74 to 81-inches. The baggage area weight was 60 lbs which was above the placarded "maximum baggage 50 LBS."

The pilot reported and the examination revealed there were no preimpact mechanical malfunctions or failures with the airframe or engine that would have precluded normal operation.

The pilot was color blind, and had been diagnosed with Crohn's disease, low back pain, insomnia as well as Parkinson's disease. His last FAA airman medical certificate was issued in 1972. According to his personal medical records, his medications at the time of the accident

included baby aspirin, a combination of diphenhydramine and acetaminophen at night for sleep, mesalamine for the Crohn's disease, rasagiline mesylate, pramipexole, a combination of carbidopa and levodopa, and amantadine for his Parkinson's disease. Sudden periods of sleep may be caused by 4 of these medications. Finally, he was using a 1% solution of atropine orally to treat excessive drooling as needed. The musculoskeletal symptoms including tremor and rigidity of his Parkinson's were somewhat alleviated but not eliminated by his use of medications; in April 2016, his score on the motor portion of the Unified Parkinson's Disease Rating Scale was 18. In addition, his health care provider documented that his tremors became worse when he was nervous and that he was beginning to have some mild cognitive issues. No post-accident toxicology testing was performed.

Two of the pilot's medications were medically disqualifying for an FAA airman medical certification because they depress the central nervous system. However, a sport pilot is not required to hold a FAA airman medical certificate and can use a U.S. driver's license to meet the medical requirements. When using a U.S. driver's license, the sport pilot must self-certify that they "do not know or have reason to know of any medical condition that would make that person unable to operate a light-sport aircraft in a safe manner." Therefore, the FAA is not involved with medical disqualification when a U.S. driver's license is used in lieu of an FAA airman medical certificate.

## History of Flight

<b>Takeoff</b>	Loss of control in flight (Defining event) Aerodynamic stall/spin
<b>Emergency descent</b>	Collision with terr/obj (non-CFIT)

## Pilot Information

<b>Certificate:</b>	Sport Pilot	<b>Age:</b>	72, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<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>	No
<b>Medical Certification:</b>	Sport Pilot	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	07/18/2016
<b>Flight Time:</b>	464 hours (Total, all aircraft), 291 hours (Total, this make and model), 464 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	BOAM LARRY	Registration:	N6271X
Model/Series:	RANS S 7	Aircraft Category:	Airplane
Year of Manufacture:	1997	Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	0196170
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	04/10/2016, Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1191.7 Hours at time of accident	Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	912UL
Registered Owner:	On file	Rated Power:	80 hp
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:	KOSH, 782 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1653 UTC	Direction from Accident Site:	6°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.05 inches Hg	Temperature/Dew Point:	24° C / 14° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Oshkosh, WI (OSH)	Type of Flight Plan Filed:	None
Destination:	Ames, IA (AMW)	Type of Clearance:	None
Departure Time:	1145 CDT	Type of Airspace:	Class D

## Airport Information

Airport:	WITTMAN RGNL (OSH)	Runway Surface Type:	Concrete
Airport Elevation:	808 ft	Runway Surface Condition:	Dry
Runway Used:	36	IFR Approach:	None
Runway Length/Width:	8002 ft / 150 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	43.980278, -88.557500 (est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Courtney Liedler	<b>Report Date:</b>	04/13/2020
<b>Additional Participating Persons:</b>	Daniel R Oskar; FAA; Milwaukee, WI		
<b>Publish Date:</b>	04/13/2020		
<b>Note:</b>	The NTSB did not travel to the scene of this accident.		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=93716">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=93716</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](#).