



National Transportation Safety Board Aviation Accident Final Report

Location:	Wautoma, WI	Accident Number:	CEN11FA531
Date & Time:	08/01/2011, 0820 CDT	Registration:	N7501Y
Aircraft:	EDWARDS DOUGLAS L SKY RANGER	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot took off from a grass runway to the east for the cross-country flight. An eyewitness observed the airplane climb to an altitude of about 100 to 150 feet above the ground. Over the east end of the runway, the airplane began a left turn to return to the airfield. During the turn, the airplane entered an aerodynamic stall, the nose of the airplane dropped, and the airplane descended and impacted the ground. The airplane was examined at the accident site. Flight control continuity was established from the cockpit control stick and rudder pedals to each respective flight control surface. An examination of the wreckage showed the engine, engine mounts, cowling, firewall and forward cockpit bent and crushed aft and twisted counterclockwise about 30 degrees, consistent with the airplane being in a left hand, nose-down spiral when it impacted the ground. An examination of the engine and other airplane systems showed no preimpact anomalies that would have 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 proper airspeed and attitude control of the airplane in the turn, which resulted in an aerodynamic stall.

Findings

Aircraft	Airspeed - Not attained/maintained (Cause) Angle of attack - Not attained/maintained (Cause)
Personnel issues	Incorrect action performance - Pilot (Cause)

Factual Information

On August 1, 2011, about 0820 central daylight time, an Edwards Sky Ranger, experimental light sport airplane, N7501Y, owned and operated by a sport pilot, impacted terrain following a loss of control during initial climb after takeoff from the Wautoma Metropolitan Airport (Y50), Wautoma, Wisconsin. The sport pilot was seriously injured and the sole passenger sustained fatal injuries. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed and a flight plan had not been filed for the cross-country flight destined for a private airstrip near Maquoketa, Iowa.

The pilot stated that he took off heading east from the grass runway at Y50 and climbed to about 200 feet over the east end of the runway. He said he circled around to do an over fly of the airport. He said that after he “straightened out there was no control over the horizontal tail.” He pulled back on the control stick several times “with no result.” The airplane then “dove straight down” impacting the ground 100 feet from the end of the runway.

An eyewitness to the accident reported that he had owned three Sky Rangers at different times, had logged hundreds of hours instructing in them, and had taught the accident pilot to fly 15 to 16 years ago. According to the eyewitness, following a preflight which included topping off the 20 gallon fuel tank and checking the oil, the pilot began his takeoff roll along runway 08. After liftoff, the pilot leveled the airplane just above the runway and built up airspeed before performing a “sharp” pull up. The airplane climbed to 100 to 150 feet before the airplane began a left hand turn as if the pilot was going to fly back over the eyewitness. While in the turn, the airplane appeared to stall, and dropped out of the eyewitness’s view. Seconds later he heard the airplane impact the ground. The eyewitness further reported that the airplane’s engine sounded really smooth during the flight and that it sounded like it was at full power as the airplane was descending towards the ground.

The National Transportation Safety Board Investigator-in-Charge conducted an examination of the airplane at the accident site. The crash site began with an impact scrape followed by an eight foot long, three foot wide impact crater that preceded the airplane main wreckage. The impact crater contained pieces of the propeller and Fiberglass from the cowling and windscreen. The accident site proceeded along a 242-degree heading. About 62 feet from the initial ground impact scrape was the airplane main wreckage. The main wreckage came to rest upright in a 35-degree nose down attitude and was oriented on a 142-degree heading. All of the airplane components were accounted for.

The cowling with the engine, engine mounts and firewall underneath and behind were crushed aft and twisted about 30 degrees counterclockwise. The forward cockpit area and main landing gear were crushed and bent aft and upward.

Both wings remained attached to the fuselage. The left wing rear spar was fractured at mid span and bent upward. The left wing strut was bent upward. The right wing was undamaged. The fuselage, aft of the cockpit, and empennage showed no damage.

All three blades of the carbon fiber propeller were found broken aft and splintered. The propeller spinner was crushed aft and twisted.

Flight control continuity was established from the cockpit control stick and rudder pedals to each respective flight control surface. An examination of the engine and other airplane systems

showed no preimpact anomalies that would have contributed to the accident.

History of Flight

Takeoff	Loss of control in flight (Defining event)
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Pilot Information

Certificate:	Recreational; Sport Pilot	Age:	55, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Sport Pilot Without Waivers/Limitations	Last Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	07/27/2010
Flight Time:	775 hours (Total, all aircraft), 354 hours (Total, this make and model), 750 hours (Pilot In Command, all aircraft), 97 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	EDWARDS DOUGLAS L	Registration:	N7501Y
Model/Series:	SKY RANGER	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Experimental Light Sport	Serial Number:	SKR0507626
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	07/22/2011, Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:	4 Hours	Engines:	1 Reciprocating
Airframe Total Time:	354 Hours	Engine Manufacturer:	ROTAX
ELT:	Installed, not activated	Engine Model/Series:	912
Registered Owner:	On file	Rated Power:	80 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	ISW, 1021 ft msl	Observation Time:	0826 CDT
Distance from Accident Site:	30 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	130°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Few / 5000 ft agl	Temperature/Dew Point:	24° C / 23° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	Light and Variable, Variable	Visibility (RVR):	
Altimeter Setting:	30.04 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Wautoma, WI (Y50)	Type of Flight Plan Filed:	None
Destination:	Maquoketa, IA	Type of Clearance:	None
Departure Time:	0820 CDT	Type of Airspace:	

Airport Information

Airport:	Wautoma Municipal (Y50)	Runway Surface Type:	Grass/turf
Airport Elevation:	859 ft	Runway Surface Condition:	Dry
Runway Used:	08	IFR Approach:	None
Runway Length/Width:	2280 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 1 Serious		

Administrative Information

Investigator In Charge (IIC):	Timothy LeBaron	Adopted Date:	01/31/2013
Additional Participating Persons:	Tim Anderson; Federal Aviation Administration; Milwaukee, WI		
Publish Date:	01/31/2013		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=81324		

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