



# National Transportation Safety Board

## Aviation Accident Data Summary

<b>Location:</b>	Willow Springs, MO	<b>Accident Number:</b>	CEN14CA532
<b>Date &amp; Time:</b>	09/01/2014, 0650 CDT	<b>Registration:</b>	N2017A
<b>Aircraft:</b>	AIRBORNE EDGE X	<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

### Analysis

The pilot stated that, about 45 minutes before departure, he obtained the current weather conditions via an internet website and observed a thunderstorm located about 100 miles west of the departure airport. About 20 minutes into the local area flight, he recalled seeing a low cloud bank, with a base of about 1,000 feet above ground level (agl), about 1/4 mile east of the airport. At the same time, he noticed an area of heavy rain from clouds located about 15 miles west of his position. He decided to land as soon as possible due to the deteriorating weather. Instead of making an approach to the airport's single runway, he decided to land toward the west in an open pasture area that was located on the airport property. Shortly after clearing trees and hangars that were located on the east side of the airport, the weight-shift-control aircraft suddenly lost altitude, from about 20 feet agl, and impacted the ground in an upright attitude. After the impact, the aircraft rolled over onto its left side. The pilot reported that the aircraft did not appear to have any forward velocity when it impacted terrain, as indicated by a lack of damage to the surrounding vegetation. The aircraft sustained substantial damage to the wing and fuselage. He stated that there were no mechanical malfunctions of the aircraft that would have precluded normal operation. Additionally, he reported that the aircraft's operating limitations included a maximum headwind and crosswind component of 21 knots and 11 knots, respectively.

Meteorological data collected during the accident investigation indicated that, at the time of the accident, there was a squall line of strong-to-severe thunderstorms within a few miles of the accident site. Local weather stations indicated that there was a wind shift from the south to the north that was associated with the passage of the frontal boundary. The weather stations also reported wind gusts reaching 24 knots. A review of weather radar imagery indicated that, at the time of the pilot's preflight weather check, there was a line of thunderstorms located about 40 miles northwest of the departure airport. The same line of thunderstorms was within a few miles of the airport at the time of the accident and moved through the area almost immediately thereafter. The meteorological data suggested that the aircraft likely encountered a gust front that was associated with approaching line of thunderstorms. Although the pilot checked the weather before departure, his failure to correctly identify the location and speed of the approaching line of thunderstorms contributed to the low-level wind shear encounter shortly before touchdown.

### Flight Events

- Prior to flight - Preflight or dispatch event
- Landing - Windshear or thunderstorm
- Landing - Loss of control in flight
- Landing - Collision with terr/obj (non-CFIT)

### Probable Cause

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

The pilot's loss of control after the weight-shift-control aircraft encountered low-level wind shear shortly before touchdown. Also causal to the accident was the pilot's inadequate preflight weather assessment that failed to correctly determine the actual location and speed of the approaching line of thunderstorms.

## Findings

Personnel issues-Task performance-Planning/preparation-Weather planning-Pilot - C  
 Personnel issues-Action/decision-Info processing/decision-Identification/recognition-Pilot - C  
 Environmental issues-Conditions/weather/phenomena-Wind-Windshear-Ability to respond/compensate - C

## Pilot Information

<b>Certificate:</b>	Sport Pilot	<b>Age:</b>	67
<b>Airplane Rating(s):</b>	None	<b>Instrument Rating(s):</b>	None
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	None
<b>Flight Time:</b>	496 hours (Total, all aircraft), 356 hours (Total, this make and model), 466 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	AIRBORNE	<b>Registration:</b>	N2017A
<b>Model/Series:</b>	EDGE X	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	On file	<b>Engine Manufacturer:</b>	Rotax
<b>Air Carrier Operating Certificate:</b>	None	<b>Engine Model/Series:</b>	582
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>	UNO, 1228 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	None
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	5 knots, 200°
<b>Temperature:</b>	22° C / 21° C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Willow Springs, MO (1H5)	<b>Destination:</b>	Willow Springs, MO (1H5)

## Airport Information

<b>Airport:</b>	Willow Springs Memorial (1H5)	<b>Runway Surface Type:</b>	Grass/turf
<b>Runway Used:</b>	N/A	<b>Runway Surface Condition:</b>	Dry; Vegetation
<b>Runway Length/Width:</b>			

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Minor	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Andrew T Fox	<b>Adopted Date:</b>	04/07/2015
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=90399">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=90399</a>		

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