



# Aviation Investigation Final Report

<b>Location:</b>	Cross Lake, Minnesota	<b>Accident Number:</b>	CEN12LA466
<b>Date &amp; Time:</b>	July 22, 2012, 09:51 Local	<b>Registration:</b>	N602JT
<b>Aircraft:</b>	TOMAN JACK JR SKYSTAR KITFOX 4	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Fatal, 1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The airplane was observed flying low and slow over a lake. The airplane stalled and entered a spin before it impacted the water. The passenger was able to exit the airplane on his own, but the pilot was pinned in the wreckage. A first responder was able to keep the pilot's head above the water until an ambulance arrived, but the pilot later succumbed to his injuries. Examination of the airplane and engine found no mechanical anomalies that would have precluded normal operation. The medical examiner found drug paraphernalia in the pilot's shirt pocket. Postaccident toxicology testing was consistent with impairment of the pilot due to his use of marijuana prior 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 adequate airspeed, which resulted in an aerodynamic stall. Contributing to the accident was the pilot's impairment due to marijuana.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Personnel issues</b>	Illicit drug - Pilot

## Factual Information

### History of Flight

#### Maneuvering-low-alt flying

Loss of control in flight (Defining event)

On July 22, 2012, at 0951 central daylight time, an experimental-amateur built Sky Star Kitfox 4 sustained substantial damage after it lost control and impacted Upper Whitefish Lake near Cross Lake, Minnesota. The private pilot was fatally injured and the passenger was seriously injured. No flight plan was filed for the local flight that departed from Pine River Regional Airport (PWC), Pine River, Minnesota, at 0938. Visual meteorological conditions prevailed for the personal flight conducted under 14 Code of Federal Regulations Part 91.

The passenger stated the purpose of the flight was to look for fishing spots in the lake and check out some property on the shoreline. The passenger said that as they headed toward the shoreline, the airplane was in a slight nose up attitude and climbing, but he did not recall how fast they were going. The doors of the airplane were open, and the passenger was looking outside "watching everything." Up to this point, it was a normal flight. He said that the airplane then suddenly jerked violently to the left, rolled, and spun down toward the lake. As soon as they hit the water, the passenger unbuckled his seatbelt and got out of the airplane. Almost immediately, a boat pulled up and he was lifted onto the boat.

There were several eyewitnesses who saw the airplane spin toward the water. One witness, who had taken flight lessons, was in his boat when he first observed the airplane. He said it was flying about twice the height of the tree tops and was headed east. The witness said the airplane's attitude was tail down and nose high. The airplane appeared to be "wallowing" and about to stall. The witness momentarily took his eyes off the airplane, but when he looked back up, the airplane was spinning nose down toward the water. He immediately drove his boat to the accident site and assisted the passenger and the pilot.

A handheld Garmin global positioning system (GPS) was found in the airplane and sent to the Safety Board's Research and Engineering laboratory in Washington DC to be downloaded. The accident flight was recorded from the time it departed Pine River Regional Airport at 0938.28 up until 0951.13 when the unit stopped recording. A review of the last minute of the flight revealed that at 0950:20, the airplane was at an altitude of 1,624 feet mean sea level (msl), or approximately 328 feet above the water headed southeast at a ground speed of 39 knots. Over the next 53 seconds, the airplane began to make a shallow descent to 1,496 feet msl (approximately 200 feet above the water) and slowed to a ground speed of 34 knots before the data ended just northwest of the shoreline.

Examination of the airplane by Federal Aviation Administration (FAA) inspectors revealed the airframe sustained substantial damage from impact with the water. No pre-impact mechanical

anomalies were noted.

According to the pilot's autopsy report, the cause of death was multiple traumatic injuries resulting from an airplane crash. No significant natural disease was identified, but the medical examiner identified an object found in the left shirt pocket as a "one hit" pipe.

The toxicology results from an independent lab used by the medical examiner found evidence of tetrahydrocannabinol (Marijuana) in the urine and performed a test that quantified the amount in the pilot's peripheral blood with a result of 0.0056 ug/ml ,along with 0.0059 ug/ml of its primary metabolite, tetrahydrocannabinol carboxylic acid.

Femoral and heart blood was sent to the FAA's Civil AeroMedical Institute's toxicology lab in Oklahoma City, Oklahoma, along with tissue specimens. The CAMI lab found the blood unsuitable for the quantification of tetrahydrocannabinol. However, 0.046 ug/ml of tetrahydrocannabinol was found in lung and tetrahydrocannabinol carboxylic acid, the primary metabolite, was found in urine (0.0952 ug/ml), liver (0.0873 ug/ml), lung (0.0094 ug/ml), and blood (0.0111 ug/ml).

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	55, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea	<b>Seat Occupied:</b>	Left
<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>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	June 28, 2010
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1350 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	TOMAN JACK JR	<b>Registration:</b>	N602JT
<b>Model/Series:</b>	SKYSTAR KITFOX 4	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	CUU-007
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	ROTAX
<b>ELT:</b>		<b>Engine Model/Series:</b>	912ULS
<b>Registered Owner:</b>	TOMAN JACK R JR	<b>Rated Power:</b>	100 Horsepower
<b>Operator:</b>	TOMAN JACK R JR	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	PWC, 1296 ft msl	<b>Distance from Accident Site:</b>	5 Nautical Miles
<b>Observation Time:</b>	09:53 Local	<b>Direction from Accident Site:</b>	270°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility:</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	150°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.94 inches Hg	<b>Temperature/Dew Point:</b>	28°C / 20°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Pine River, MN (PWC)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Cross Lake, MN	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	09:38 Local	<b>Type of Airspace:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal, 1 Serious	<b>Latitude, Longitude:</b>	46.40139,-94.134719(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Yeager, Leah
<b>Additional Participating Persons:</b>	Kevin Morris; FAA/FSDO; Minneapolis, MN
<b>Original Publish Date:</b>	August 13, 2013
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=84410">https://data.nts.gov/Docket?ProjectID=84410</a>

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