



National Transportation Safety Board Aviation Accident Final Report

Location:	Lihue, HI	Accident Number:	WPR09LA386
Date & Time:	08/01/2009, 1445 HST	Registration:	N44VZ
Aircraft:	AIRBORNE WINDSPORTS PTY LTD XT-912-L	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 Serious
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

The pilot of the light sport weight-shift-control airplane said that they were descending through a "hole in the clouds" when the aircraft encountered severe turbulence, resulting in the flight instructor losing control of the aircraft. The flight instructor subsequently deployed the aircraft's onboard rocket-propelled parachute system before impacting mountainous terrain and coming to rest on a hillside, entangled in surrounding trees. The flight instructor reported no anomalies with the airplane prior to or during the flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The flight instructor's failure to maintain control of the airplane following an in-flight encounter with turbulence during descent.

Findings

Aircraft	Performance/control parameters - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Instructor/check pilot (Cause)
Environmental issues	Convective turbulence - Effect on equipment

Factual Information

On August 1, 2009, about 1445 Hawaii standard time, an Airborne Windsports XT-912-L, light sport weight-shift-control airplane, N44VZ, sustained substantial damage following an uncontrolled descent and impact with terrain about 12 miles northwest of Lihue, Hawaii. Both the flight instructor and his student sustained serious injuries. The airplane was registered to a private individual and operated by Birds in Paradise, of Kapaa, Hawaii. Visual meteorological conditions prevailed for the local instructional flight, which was conducted in accordance with 14 Code of Federal Regulations (CFR) Part 91, and a flight plan was not filed. The flight departed the Fort Allen Airport (PAK), Hanapepe, Hawaii, about 1400.

In a statement provided to the NTSB investigator-in-charge (IIC), the flight instructor reported that after departing with his student on the instructional flight to the east, and after reaching an altitude of about 3,000 feet, he turned north toward the Wailiali Crater. The flight instructor stated that as he approached the area of the crater, he determined that "...the area there provided more than enough VFR (visual flight rules weather) to the ground below, and I would begin a slow descent to the crater area." The flight instructor further stated that, "Everything was going fine. As I descended my aircraft became violently rocked about in a matter of just seconds. I vigorously held the control bar and applied full power to try and take the aircraft back up to where it was calm, but to no avail. The control bar was violently ripped from my hands with severe force." The flight instructor reported that, "I fought all I could to maintain control of the [air]craft. However, as I had clear visual the entire time of my surroundings, I paid close attention to the rate of speed at which the ground was approaching. It became my final decision, with all other opportunities exhausted, that pulling the parachute was going to be the only thing that would save [us]. Upon pulling the chute, maybe just 200 to 300 feet above the ground, I lost consciousness." The aircraft subsequently impacted a hillside with the parachute becoming entangled in the surrounding trees.

In a statement submitted to the IIC, the student pilot reported that as the flight headed north towards the mountains and into overcast skies, the flight instructor said he had found a hole in the clouds to drop down [through]. The student pilot stated, "To me, it looked like a 'dark spot' [rather] than a hole. Just as [the flight instructor] was about to drop down into the hole, another flight instructor for the same company flying nearby radioed, 'No, it's closing up.' " The student pilot further stated that as soon as they entered "the hole" the aircraft stopped flying and "started bouncing around like popcorn in a popcorn popper." The student pilot reported that the aircraft started to rotate in a downward spiral. He then heard the parachute deploy, and "One or two seconds later we impacted [terrain]."

The flight instructor reported that the local weather at the time of the accident was wind from the northeast at 17 knots, visibility 10 miles, scattered clouds with heights unknown, broken clouds at 4,000 feet, temperature, dew point and altimeter setting unknown, and the severity of turbulence as extreme.

According to a Federal Aviation Administration (FAA) aviation safety inspector, the pilot was on top of a broken cloud deck trying to find a hole to descend through into a crater. The inspector stated that apparently the flight instructor saw what he thought was a hole to descend through and started to spiral down through it, but the hole closed up, and at about the same time severe updrafts and downdrafts caused the pilot to lose control of the aircraft. The inspector reported that after the flight instructor deployed the parachute, the aircraft impacted

the side of a mountain cliff, with the parachute getting caught in a tree, which prevented the aircraft from sliding further down the cliff.

History of Flight

Enroute-descent	Turbulence encounter Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Flight Instructor Information

Certificate:	Flight Instructor	Age:	44, Male
Airplane Rating(s):	None	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	Sport Pilot	Toxicology Performed:	No
Medical Certification:	None None	Last Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	278 hours (Total, all aircraft), 275 hours (Total, this make and model), 145 hours (Last 90 days, all aircraft)		

Student Pilot Information

Certificate:	Student	Age:	, Male
Airplane Rating(s):	None	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	None None	Last Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1 hours (Total, all aircraft), 1 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	AIRBORNE WINDSPORTS PTY LTD	Registration:	N44VZ
Model/Series:	XT-912-L	Aircraft Category:	Weight-Shift
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Experimental Light Sport	Serial Number:	XT-912-0230
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	07/26/2009, Annual	Certified Max Gross Wt.:	992 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1053 Hours	Engine Manufacturer:	ROTAX
ELT:	Not installed	Engine Model/Series:	912UL
Registered Owner:	Gerry Charlebois	Rated Power:	80 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	LIH, 153 ft msl	Observation Time:	1400 HST
Distance from Accident Site:	12 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	165°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Scattered	Temperature/Dew Point:	
Lowest Ceiling:	Broken / 4000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	17 knots/ 17 knots, 17°	Visibility (RVR):	
Altimeter Setting:		Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Port Allen Airp, HI (PAK)	Type of Flight Plan Filed:	None
Destination:	Port Allen Airp, HI (PAK)	Type of Clearance:	None
Departure Time:	1400 HST	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	2 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious		

Administrative Information

Investigator In Charge (IIC):	Thomas Little	Adopted Date:	04/22/2010
Additional Participating Persons:	Darett I Kanayama; Federal Aviation Administration; Honolulu, HI		
Publish Date:	04/22/2010		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74456		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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.