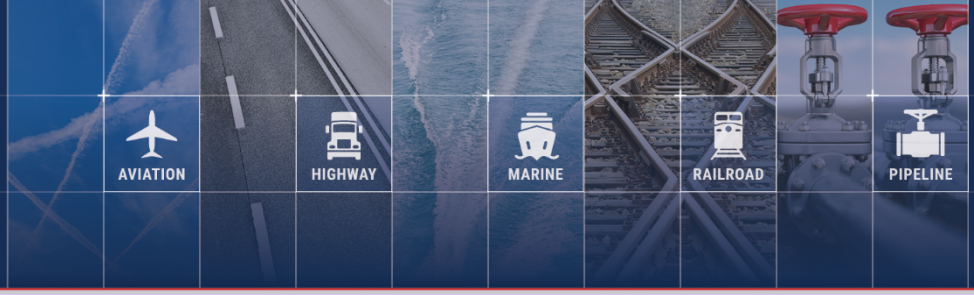

Aviation Investigation Final Report

Location:	Chelan, Washington	**Accident Number:**	LAX08LA290
Date & Time:	September 6, 2008, 11:00 Local	**Registration:**	N227EK
Aircraft:	Airborne XT-912	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The private pilot had stopped flying about 1970, resuming his flying again about 11 months prior to the accident. He received instruction in weight-shift aircraft with the goal of obtaining his sport pilot endorsement. On the day of the accident, the pilot received his solo endorsement from his instructor and made a 1-hour solo flight. After resting for about an hour, the pilot began his second solo flight. The accident occurred about 40 minutes into this flight. According to witnesses, the pilot performed several touch-and-go landings without incident. During the initial takeoff climb following another touch-and-go landing, the aircraft climbed at a "steep" angle, and at an altitude of about 100 to 200 feet above ground level, the aircraft rolled left, nosed down, spiraled and descended to ground impact. One witness stated that the engine remained at takeoff power throughout the entire event. An on-scene examination of the wreckage conducted by a Federal Aviation Administration inspector indicated the aircraft impacted in a near-vertical attitude. The examination revealed no evidence of any preimpact damage or discrepancies. An autopsy determined the pilot's cause of death was blunt force trauma, and the findings in the autopsy report did not include any notations of preexisting disease. The reason the pilot lost control of the aircraft could not be determined.

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 during initial climb, which resulted in an aerodynamic stall.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Pitch control - Not attained/maintained
Aircraft	Airspeed - Not attained/maintained

Factual Information

History of Flight

Initial climb	Loss of control in flight (Defining event)
Initial climb	Aerodynamic stall/spin
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On September 6, 2008, about 1100 Pacific daylight time, an experimental Airborne XT-912 weight-shift aircraft, N227EK, impacted the ground following a loss of control during initial takeoff climb from the Lake Chelan Airport, Chelan, Washington. The private pilot, the sole occupant, was killed, and the aircraft was destroyed. Visual meteorological conditions prevailed, and no flight plan was filed for the local solo instructional flight. The Title 14 Code of Federal Regulations Part 91 flight originated from the Lake Chelan Airport about 1020.

On the day of the accident, the pilot received his solo endorsement from his instructor and made a 1-hour solo flight. After resting for about an hour, the pilot began his second solo flight. The accident occurred about 40 minutes into this flight. According to the instructor, he was flying with another student and was in radio communication with the pilot during his flight. Just prior to the accident, the flight instructor heard the pilot announce he would be making a full stop landing.

According to witnesses, the pilot performed several touch-and-go landings on runway 02 without incident. During initial takeoff climb following another touch-and-go landing, the aircraft climbed at a "steep" angle, and at an altitude of about 100 to 200 feet above ground level, the aircraft rolled left, nosed down, spiraled, and descended to ground impact. One witness stated that the engine remained at takeoff power throughout the entire event.

A Federal Aviation Administration (FAA) inspector conducted an on scene examination of the wreckage. The inspector reported that his observations indicated the aircraft impacted in a near vertical attitude on the taxiway west of the runway. His inspection revealed no evidence of any pre-impact damage or discrepancies.

Examination of the aircraft's maintenance records by the FAA inspector indicated that the aircraft was certificated in the experimental category for the purpose of operating light sport aircraft on January 28, 2008. At the time of certification, the aircraft had a current condition inspection. At the time of the accident, the aircraft had accumulated about 35 to 40 hours of flight time. The pilot was reportedly in the process of purchasing the aircraft from the flight instructor.

The pilot, age 74, held a private pilot certificate with a single engine land airplane rating. His last FAA medical certificate was issued in November 1970. According to the FAA inspector,

who reviewed the pilot's flight logbooks, the pilot had accumulated about 265 total flight hours, with 215 of those hours acquired prior to 1968. The pilot began flying again in October 2007, receiving instruction in weight-shift aircraft with the goal of obtaining his sport pilot endorsement. In February 2008, he received about 10 hours flight instruction in a Cessna 172 and successfully completed a biennial flight review. Following the flight review, the pilot had flown about 30 hours, most of it in the accident aircraft.

According to the flight instructor, on the morning of the accident, the pilot appeared to be well rested, alert, and in a positive frame of mind. Witnesses reported that between flights, the pilot had several conversations and no abnormal observations were made.

An autopsy of the pilot was conducted by the Chelan County Coroner's Office. The cause of death was reported as "multiple internal injuries due to blunt impact to the head, trunk and extremities." The findings in the autopsy report did not include any notations of pre-existing disease. Toxicology tests were conducted by the FAA's Toxicology and Accident Research Laboratory. Ethanol was detected at 10 mg/dL in muscle and 22 mg/dL in liver. The drugs amlodipine and atenolol were detected (unquantified) in liver and kidney.

Pilot Information

Certificate:	Private	**Age:**	74,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Sport pilot None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	February 28, 2008
Flight Time:	265 hours (Total, all aircraft), 30 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Airborne	**Registration:**	N227EK
Model/Series:	XT-912	**Aircraft Category:**	Weight-shift
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	XT912206
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	January 28, 2008 Condition	**Certified Max Gross Wt.:**	1020 lbs
Time Since Last Inspection:	35 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	35 Hrs at time of accident	**Engine Manufacturer:**	Rotax
ELT:	Not installed	**Engine Model/Series:**	912UL
Registered Owner:	On file	**Rated Power:**	
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Chelan, WA (S10)	**Type of Flight Plan Filed:**	None
Destination:	(S10)	**Type of Clearance:**	None
Departure Time:	10:20 Local	**Type of Airspace:**	

Airport Information

Airport:	Lake Chelan S10	**Runway Surface Type:**	Asphalt
Airport Elevation:	1263 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	02	**IFR Approach:**	None
Runway Length/Width:	3503 ft / 60 ft	**VFR Approach/Landing:**	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	47.866111,-119.942779

Administrative Information

Investigator In Charge (IIC):	Struhsaker, Georgia
Additional Participating Persons:	Michael T Robertson; FAA FSDO; Spokane, WA
Original Publish Date:	July 28, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=68884

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties … and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available here.