



National Transportation Safety Board Aviation Accident Final Report

Location:	Chugiak, AK	Accident Number:	ANC09FA003
Date & Time:	10/03/2008, 1500 AKD	Registration:	N7511J
Aircraft:	ANTONOVICH ANTON B CHALLENGER II	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The non-certificated pilot departed on a Title 14, CFR Part 91, local area personal flight in an experimental light sport homebuilt airplane. A witness reported seeing the airplane flying about 100 feet above trees before the engine noise increased, and the nose pitched down. The airplane subsequently descended nose first into dense woods. The pilot's flight instructor reported to the NTSB that he had given the pilot 19.2 hours of flight instruction, but the pilot had not progressed to a point where he could endorse him for a solo flight. He said that the pilot routinely struggled with pitch control during takeoff, landing, or when engine power was increased or decreased. Examination of the airplane did not disclose any preimpact mechanical malfunction. Given the lack of mechanical deficiencies with the airplane's engine or flight controls, in conjunction with the witness and the flight instructor's statements, it is likely the pilot failed to adequately maintain control of the airplane while maneuvering.

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 control of the airplane while maneuvering, resulting in an in-flight collision with trees. Contributing to the accident was the pilot's lack of experience.

Findings

Aircraft	Pitch control - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Pilot (Cause) Total experience - Pilot (Factor)
Environmental issues	Tree(s) - Not specified

Factual Information

HISTORY OF FLIGHT

On October 3, 2008, about 1500 Alaska daylight time, an experimental light sport (E-LSA) homebuilt Challenger II airplane, N7511J, sustained substantial damage when it collided with tree-covered terrain following a loss of control while maneuvering, about 5 miles northeast of Chugiak, Alaska. The airplane was being operated as a visual flight rules (VFR) personal flight under the provisions of Title 14 Code of Federal Regulations Part 91, when the accident occurred. The non-certificated pilot died at the scene. Visual meteorological conditions prevailed, and no flight plan was filed for the local area flight. Witnesses reported that the accident airplane departed from the Birchwood Airport, Chugiak, about 1455.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on October 7, a helicopter pilot that was inbound to the Birchwood Airport reported that he saw the accident airplane's departure from Runway 19L. He said that just after the accident airplane became airborne, it began to "porpoise" which continued during climb. The helicopter pilot said that just after takeoff, the airplane turned left, while still very low, and flew over an area of hangars and buildings on the northeast side of the airport. In a report to the NTSB, the helicopter pilot wrote, in part: "At one time we thought he was going to hit one of the buildings due to a steep dive. We continued our approach and the aircraft was last observed heading northbound."

Witnesses reported to responding emergency crews that just before the accident they saw the airplane flying northbound, about 100 feet above the trees. The witness said that as it continued northbound, the engine noise increased, and the nose pitched down. The witness said that the airplane's nose continued to pitch down until the airplane descended nose first into dense woods.

PERSONNEL INFORMATION

The pilot did not hold an FAA pilot or medical certificate, nor was he required to while operating an E-LSA airplane as a student pilot.

No personal flight records were located for the pilot, and the aeronautical experience listed on page 3 of this report was obtained from the pilot's flight instructor.

During a telephone conversation with the NTSB IIC on October 7, the flight instructor that had been providing primary flight instruction to the accident pilot reported that he had been flying with the pilot from November 11, 2006, until June 15, 2008. The flight instructor also noted that he had originally built the accident airplane from a kit, and as part of the sale agreement between himself and the accident pilot, he would teach the pilot how to fly the airplane. According to the flight instructor, the pilot had received 19.2 hours of flight instruction in Challenger II airplanes, but he had not progressed to a point where he could endorse the pilot for a solo flight. He added that the pilot frequently struggled with pitch control of the Challenger II airplane during takeoff, landing, or when engine power was increased or decreased. The flight instructor also noted that the flight characteristics of a Challenger II airplane with one occupant, compared to two occupants, are very different.

The flight instructor told the NTSB IIC that he had refused to fly with the pilot in the accident airplane until after the regularly scheduled annual inspection was completed on the airframe

and engine, which was due July 31, 2008. The flight instructor said he was unaware if the accident pilot had ever complied with the scheduled annual inspection, but he assumed not, since the pilot had not called to schedule more flight training in his airplane.

AIRCRAFT INFORMATION

The airplane was built by the original owner from a kit, and was issued an FAA experimental airworthiness certificate with experimental limitations on July 15, 2007.

The airplane had an aluminum tube frame that formed the fuselage structure. The nose of the airplane was formed by a fiberglass nose cone. The fuselage, rudder, and horizontal stabilizer were enclosed by Ceconite-covered fabric. The wings had aluminum tube frames with loose-fitting, canvas-like fabric material. The airplane was designed with two tandem seats in the cockpit, with the pilot's seat in front.

The airplane was equipped with an aft-mounted, pusher, Rotax 503, 52 horsepower engine.

No maintenance records or construction build records were located for the airplane. No weight and balance data for the airplane was located.

METEOROLOGICAL INFORMATION

The closest weather reporting facility was the Birchwood Airport, about 5 miles southwest of the accident site. At 1456, an aviation routine weather report (METAR) was reporting, in part: Wind 260 degrees at 3 knots; visibility, 10 statute miles; clouds and sky condition, few at 3,000 feet, 3,700 feet scattered, 4,800 feet broken; temperature, 43 degrees F; dew point, 30 degrees F; altimeter, 29.35 inHg.

COMMUNICATIONS

The airplane was not equipped with a radio.

WRECKAGE AND IMPACT INFORMATION

The National Transportation Safety Board IIC, and an FAA airworthiness inspector from the Anchorage Flight Standards District Office, Anchorage, Alaska, examined the wreckage at the accident site on October 3.

All of the airplane's major components were found at the main wreckage site. A path of wreckage debris, from an area of broken trees to the wreckage point of rest, was on a magnetic heading of approximately 190 degrees. (All heading/bearings noted in this report are oriented toward magnetic north.)

The airplane's fuselage was discovered inverted, and the fiberglass nose section was crushed and buckled inward. The primary crush zones extended from the fiberglass nose cone back to about the aft passenger seat area, which encompassed the pilot's cockpit area. The cockpit area was obliterated by impact damage. The instrument panel was crushed and twisted under the fuselage.

The wings remained attached to the fuselage, and both were extensively distorted. A portion of the airplane's right wing and right aileron was suspended from a tree, adjacent to the main wreckage site.

Due to impact damage, continuity of the flight control cables and push-pull tubes could not be established.

The propeller hub assembly remained connected to the engine crankshaft. Both wooden propeller blades were broken about mid-span, and each had leading edge gouging.

There were no preaccident mechanical problems discovered with the airplane's engine or flight controls during the NTSB IIC's on-scene wreckage examination.

MEDICAL AND PATHOLOGICAL INFORMATION

A postmortem examination of the pilot was conducted under the authority of the Alaska State Medical Examiner, 4500 South Boniface Parkway, Anchorage, Alaska, on October 5, 2008. The cause of death for the pilot was attributed to blunt force, traumatic injuries.

The FAA's Civil Aeromedical Institute (CAMI) did a toxicological examination on November 4, 2008, and was negative for alcohol or drugs.

WRECKAGE RELEASE

The Safety Board released the wreckage, at the accident site, to the owner's representatives on October 3, 2008. The Safety Board retained no parts or components.

History of Flight

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

Pilot Information

Certificate:	None	Age:	61, 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:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	None	Last Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	19 hours (Total, all aircraft), 19 hours (Total, this make and model), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	ANTONOVICH ANTON B	Registration:	N7511J
Model/Series:	CHALLENGER II	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Experimental Light Sport	Serial Number:	CH2-0703-R-2342
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	502
Registered Owner:	ROILAND RICHARD H	Rated Power:	52 hp
Operator:	ROILAND RICHARD H	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	PABV, 83 ft msl	Observation Time:	1456 ADT
Distance from Accident Site:	240 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	5°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Few / 3000 ft agl	Temperature/Dew Point:	6°C / -1°C
Lowest Ceiling:	Broken / 4800 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	3 knots, 260°	Visibility (RVR):	
Altimeter Setting:	29.35 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Birchwood, AK (BVC)	Type of Flight Plan Filed:	None
Destination:	Birchwood, AK (BVC)	Type of Clearance:	None
Departure Time:	1455 ADT	Type of Airspace:	

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Clinton O Johnson	Adopted Date:	09/30/2009
Additional Participating Persons:	Jeffery A Miller; Federal Aviation Administration (Airworthiness); Anchorage, AK		
Publish Date:	09/30/2009		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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