

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN11FA346	05/22/2011 1050 MDT	Regis# N420FH	Erie, CO	Apt: Erie Municipal KEIK
Acft Mk/Mdl HANSEN IB C CASSUTT III M		Acft SN NAC 2009-1	Acft Dmg: SUBSTANTIAL	Rpt Status: Unk Prob Caus: Pending
Eng Mk/Mdl EXPERIMENTAL O-200 A			Fatal 1 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: HANSEN IB		Opr dba:		Aircraft Fire: GRD

Narrative

HISTORY OF FLIGHT

On May 22, 2011, approximately 1050 mountain daylight time, an amateur built Cassutt III M airplane, N420FH, impacted terrain while maneuvering after takeoff near Erie, Colorado. The private pilot was fatally injured. The airplane sustained substantial damage and a post-crash fire ensued. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a flight test. Visual meteorological conditions prevailed for the flight, which was being operated without a flight plan. The local flight was originating at the time of the accident.

The accident flight was the airplane's first flight or maiden flight. A witness observed the airplane takeoff from the airport, climb to about 300 feet, and enter a sudden left turn. The airplane was then observed to descend towards the ground and impact terrain.

PERSONNEL INFORMATION

The pilot, age 64, held a private pilot certificate with ratings for airplane single-engine land and instrument airplane. A third class airman medical certificate was issued on December 9, 2009, with the limitation that the pilot must have glasses available for near vision. On his medical application, the pilot reported using Atenolol to control his high blood pressure. At the time of the last medical application, the pilot reported having logged 1,975 hours with 35 hours in the previous six months.

AIRCRAFT INFORMATION

The Cassutt is a low-wing, fixed gear airplane, serial number NAC 2009-1, was built by the accident from plans, and was completed in 2011. It was powered by a 100 horsepower experimental engine, which drove a Sterba 58x64 2-bladed wood propeller. The airplane employed a steel tubing frame, covered with fiberglass, fabric, and laminated plywood. The airplane's airworthiness certificate and experimental operating limitations were issued on May 16, 2011.

METEOROLOGICAL INFORMATION

At 1049, the automated weather observation facility at the Rocky Mountain Metropolitan Airport (BJC), Broomfield, Colorado, reported wind 240 degrees at 12 knots gusting to 19 knots, visibility 40 miles, few clouds at 7,000 feet, broken layers at 15,000 and 20,000, temperature 64 degrees Fahrenheit, dew point 28 degrees Fahrenheit, and a barometric pressure of 29.88 inches of Mercury.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site revealed that the airplane collided with trees located 350 yards west-northwest of the runway's departure end. Downed tree limbs and impact marks on aspen trees revealed an impact angle of approximately 50 degrees nose down. A two foot deep crater contained fragments of the airplane's composite materials as well as portions of the wooden propeller. The airplane was found inverted, approximately eight feet from the impact crater. A post-crash fire consumed most of the airplane's coverings. All airplane components were found at the accident scene. A portion of the right wing composite casing was found separated from the right wing and was entangled in aspen trees. The spruce wing spar remained attached to the fuselage and displayed thermal damage. Flight control continuity was established from the cockpit controls to the flight control surfaces. The aileron push-pull rod ends displayed overload fractures. The engine received extensive thermal damage. Both magnetos were impact and fire damaged; neither magneto could produce a spark. Engine continuity and compression was confirmed by rotating the propeller by hand. The oil screen contained a tiny amount of particulates, consistent with a new engine. All fuel screens were found to be clean. No anomalies were found with either the airframe or the engine.

MEDICAL AND PATHOLOGICAL INFORMATION

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On May 23, 2011, an autopsy was performed on the pilot by the Weld County Office of the Coroner/Medical Examiner as authorized by the Weld County Coroner. Of note, the medical examiner discovered that the heart's left anterior descending artery had up to 70-percent stenosis with 100-percent in many of the branches. The medical examiner concluded that the pilot's heart disease may have contributed to the plane crash. He noted that "[i]t is possible that sudden cardiac death occurred shortly after takeoff and that led to the crash, as there are no definitive control type injuries to the extremities." The manner of death was ruled an accident.

The Federal Aviation Administration FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed forensic toxicology on specimens from the pilot. The report noted that following findings:

0.821 (ug/mL, ug/g) Atenolol detected in Blood (peripheral)

Atenolol detected in Urine

The United States National Library of Medicine listed atenolol as a medical used alone or in combination with other medications to treat high blood pressure. The medication is also used to prevent angina (chest pain) and improve survival after a heart attack. Atenolol works by relaxing blood vessels and slowing heart rate to improve blood flow and decrease blood pressure.

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Accident Rpt# CEN11CA527	07/22/2011 830 EDT	Regis# N240JS	Ashtabula, OH	Apt: Ashtabula County Airport HZY
Acft Mk/Mdl SNOW QUICKIE 2		Acft SN JS 0001	Acft Dmg: SUBSTANTIAL	Rpt Status: Unk Prob Caus: Pending
Eng Mk/Mdl CHEVROLET CORVAIR			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PILOT		Opr dba:		Aircraft Fire: NONE
				AW Cert: SPE

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Accident Rpt# CEN11LA527	07/22/2011 830 EDT	Regis# N240JS	Ashtabula, OH	Apt: Ashtabula County Airport HZY
Acft Mk/Mdl SNOW QUICKIE 2		Acft SN JS 0001	Acft Dmg: SUBSTANTIAL	Rpt Status: Unk Prob Caus: Pending
Eng Mk/Mdl CHEVROLET CORVAIR			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PILOT		Opr dba:		Aircraft Fire: NONE
				AW Cert: SPE

Narrative

On July 22, 2011, about 0830 eastern daylight time, an experimental amateur-built Snow Quickie 2, N240JS, impacted terrain during an aborted takeoff at Ashtabula County Airport (HZY), Ashtabula, Ohio. The certificated commercial pilot was uninjured. The airplane sustained substantial damage to the canard, both wings, and empennage. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a test flight. Visual meteorological conditions prevailed and a flight plan had not been filed for the local flight that was originating at the time of the accident.

The pilot was performing a takeoff as part of a phase 1 test flight after having attempted a previous takeoff that resulted in the airplane not being able to lift off. During the accident takeoff, the airplane was unable to achieve an out of ground effect climb while the airplane nose pitched up and down. The pilot aborted the climb by reducing power after which the airplane descended, bounced and veered off the remaining runway. The airplane sustained substantial damage to the canard, both wings, and empennage. The pilot stated that the airplane engine speed only achieved 2,600 to 2,690 rpm during the test flight and not the expected speed of 3,300 to 3,400 rpm.

The pilot stated that he had consulted with other experimental aircraft owners who had made use of the accident engine make and model (Chevrolet Corvaire engine, serial number TO317YN, rated at 110 horsepower) on their aircraft. One of these aircraft owners used a Sensenich 54 x 57 propeller on the engine. The pilot stated that he changed the propeller on his airplane from a 60 x 63 propeller to a Sterba 54 x 57 propeller, after which the engine was able to achieve a speed of 2,600-2,690 rpm during high speed taxi runs. The pilot believed that the engine would achieve 3,300-3,400 rpm in level flight. The pilot said that excessive pitch would explain smooth operation of the engine without achieving "full power." A Federal Aviation Administration inspector thought that the propeller pitch was not allowing the engine to develop full power. The pilot stated that other possibilities for the lack of engine speed could be attributed to the reported density altitude of 2,000 feet, which would affect "lift, power, and thrust adversely." The pilot said that he had set the distributor advance to 32 degrees at 2,220 rpm. He said that at that time, the engine achieved a speed of 2,700 rpm. The pilot said that the engine was suppose to gain about 600 rpm at full throttle and level flight. He said that the distributor timing could have changed so that full timing advance was not achieved. The pilot said that this would explain smooth engine operation without achieving "full power." The pilot said that upon seeing less the 2,700 rpm during the high speed taxi, he should have been alerted to check the distributor advance setting. Instead, the pilot thought the engine speed of 2,600-2,690 rpm was a function of propeller drag at low airspeed and that the engine would accelerate to 3,300 rpm in flight with full throttle.