Aviation Investigation Final Report

Location:	Niwot, Colorado	**Accident Number:**	DEN06LA026
Date & Time:	December 24, 2005, 09:25 Local	**Registration:**	N94CV
Aircraft:	Syracuse Kitfox	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses observed the airplane flying low over a reservoir, pull straight up, perform a "barrel roll", reverse direction, and depart the area. Approximately 30 minutes later, the airplane returned to the area, flying in an east to west direction, approximately 100 to 200 feet agl over the ice-covered reservoir. As the airplane reached the west end of the reservoir, the airplane went straight up and performed an aerobatic "barrel roll" maneuver. The airplane then descended straight down and impacted the edge of the ice-covered reservoir in a nose-down attitude. Examination of the airframe and engine revealed no anomalies that would have precluded operation. The pilot had not logged any formal aerobatic training.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper in-flight decision to perform aerobatics at a low altitude resulting in a loss of control and impact with terrain. A contributing factor was the pilot's lack of aerobatic experience.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings
1. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

2. (C) AEROBATICS - IMPROPER - PILOT IN COMMAND
3. (F) LACK OF EXPERIENCE - PILOT IN COMMAND
4. ALTITUDE - LOW
5. STALL - ENCOUNTERED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
6. TERRAIN CONDITION - WATER,FROZEN

Factual Information

On December 24, 2005, approximately 0925 mountain standard time, a Syracuse Kitfox single-engine experimental airplane, N94CV, was destroyed when impacted terrain following a loss of control while maneuvering near Niwot, Colorado. The pilot and passenger sustained fatal injuries. The airplane was registered to the pilot and a private individual, and operated by the pilot. Visual meteorological conditions prevailed, and a flight plan was not filed for the Title 14 Code of Federal Regulations Part 91 personal flight. The local flight departed Erie Municipal Airport, Erie, Colorado, approximately 0900.

According to witness statements obtained by the Boulder County Sheriff's Office, Boulder, Colorado, witnesses observed the airplane flying low over Panama Reservoir, pull straight up, perform a "barrel roll", reverse direction, and depart the area. Approximately 30 minutes later, the airplane returned to the area, flying in an east to west direction, approximately 100 to 200 feet agl over the ice-covered reservoir. As the airplane reached the west end of the reservoir, the airplane went straight up and performed an aerobatic "barrel roll" maneuver. The airplane then descended straight down and impacted the edge of the reservoir in a nose-down attitude. Several witnesses then notified the local authorities of the accident.

According to an FAA inspector who responded to the accident site, the airplane came to rest on top of the ice-covered reservoir adjacent to the shoreline. All flight control surfaces and airplane components were located in the debris area.

On January 5, 2006, at the facilities of Beegles Aircraft Services, Greeley, Colorado, under the supervision of the NTSB investigator-in-charge, the airplane wreckage was examined. Examination of the airframe revealed the right wing was destroyed and the left wing exhibited leading edge to aft crush damage. The right side of the cockpit and cabin structure was crushed upward and aft. Control continuity was established from the cockpit controls to the flight control surfaces. The three bladed propeller was splintered and fragmented. No anomalies were noted with the airframe or engine which would have precluded operation prior to impact.

According to the pilot's logbook, he had accumulated 710 total flight hours, of which 54 hours were in the accident airplane, and no formal aerobatic training was logged.

Pilot Information

Certificate:	Commercial; Private	**Age:**	25,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	December 1, 2003
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	September 1, 2005
Flight Time:	710 hours (Total, all aircraft), 54 hours (Total, this make and model), 617 hours (Pilot In Command, all aircraft), 1 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Syracuse	**Registration:**	N94CV
Model/Series:	Kitfox	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	ECZ 007
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	August 1, 2005 Condition	**Certified Max Gross Wt.:**	1200 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	793 Hrs as of last inspection	**Engine Manufacturer:**	Rotax
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	912 UL
Registered Owner:	Neil Bresler	**Rated Power:**	81 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BJC,5670 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	09:30 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Scattered / 16000 ft AGL	**Visibility**	75 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	17 knots / 0 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.2 inches Hg	**Temperature/Dew Point:**	8°C / -16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ERIE, CO (48V)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	VFR
Departure Time:	09:00 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	40.039443,-105.22583

Administrative Information

Investigator In Charge (IIC):	Sauer, Aaron
Additional Participating Persons:	John Botterill; Federal Aviation Administration; Denver, CO
Original Publish Date:	May 30, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=62993