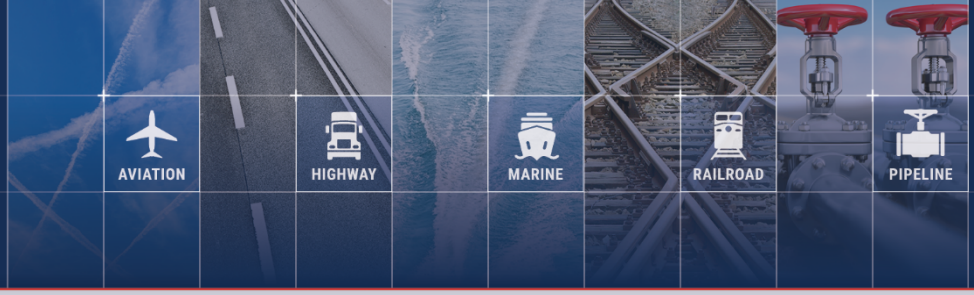

Aviation Investigation Final Report

Location:	Walsenburg, Colorado	**Accident Number:**	CEN12FA462
Date & Time:	July 21, 2012, 11:35 Local	**Registration:**	N96YK
Aircraft:	NANCHANG CHINA CJ-6A	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses observed the airplane as it entered the downwind leg of the traffic pattern and saw the landing gear and flaps configured for landing. They stated that the airplane's airspeed appeared to slow as the airplane turned right toward the runway. According to the witnesses, during the turn, the airplane's bank angle and roll rate increased and directional control of the airplane was lost. The airplane entered a nose-low spiral and rapidly descended. Based on the witness reports of the airplane's steep bank angle and low altitude, it is likely the airplane stalled during the turn from base-to-final leg in the traffic pattern, and the pilot was unable to regain control before it impacted terrain. A postaccident examination of the airplane did not reveal any mechanical malfunctions or anomalies that would have precluded normal operation of the airplane.

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 airplane control while turning from base to final leg in the traffic pattern.

Findings

Aircraft	(general) - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Approach-VFR pattern base	Loss of control in flight (Defining event)
Approach-VFR pattern base	Aerodynamic stall/spin
Uncontrolled descent	Collision with terr/obj (non-CFIT)

HISTORY OF FLIGHT

On July 21, 2012, about 1135 mountain daylight time, an experimental Nanchang China CJ-6A airplane, N96YK, impacted terrain near the Spanish Peaks Airfield (4V1), Walsenburg, Colorado. The private pilot and the passenger were both fatally injured. The airplane sustained substantial damage. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed for the flight, which operated without a flight plan. The flight originated from an undetermined location and was en route to 4V1.

The pilot was flying to 4V1 to join three other airplanes for a formation flight. The other pilots in the formation were already at the airfield waiting for the accident pilot and observed the accident. The witnesses reported that the airplane approached the airfield from the north, overflew the midpoint of the runway, and entered the downwind leg for a right base turn to runway 8. The airplane was observed to lower the landing gear and extend the flap. The witnesses perceived the airplane's airspeed to slow as it started a right bank turn that quickly increased in bank angle and roll rate. The witnesses described the airplane in a spin or nose low spiral as it descended and impacted terrain.

PERSONNEL INFORMATION

The pilot, age 43, held a private pilot certificate for airplane single engine land. The pilot’s most recent flight review was accomplished on July 26, 2012. On July 11, 2011, the pilot was issued a third class medical certificate without limitations. On his medical certificate application, the pilot reported having accumulated 420 total hours with 70 hours in the preceding six months. The pilot is reported to have logged at least 50-60 hours in the CJ-6A and the pilot's total time is estimated about 500 hours.

The pilot was a member of the Red Star Pilots Association, and received familiarity training in the CJ-6A to include an introduction to the airplane’s stall characteristics. Other than the introduction flight, it is unknown how often, or how recent, the pilot may have practiced stall recognition and recovery flight exercises in the CJ-6A.

AIRCRAFT INFORMATION

The tandem two-seat, low wing, single engine Nanchang China CJ-6A airplane, serial number 1232007, was manufactured in 1973. It was powered by a 285 horsepower Huosai 6JIA air-cooled radial engine driving a Nanchang J9G1, metal, two-blade propeller. The airplane was originally manufactured in China for use as a military trainer. The airplane was exported and registered with the Federal Aviation Administration (FAA) under the experimental category for exhibition purposes. On March 14, 2012, the airplane's most recent inspection was conducted in accordance with FAR 43 Appendix D, at an airframe total time of 2,717.5 hours and an engine total time of 677.5 hours.

Registration documents filed with the FAA show that the pilot acquired the airplane on March 14, 2012.

METEOROLOGICAL INFORMATION

At 1153 mountain daylight time, an automated weather reporting station located at Pueblo Memorial Airport (KPUB), Pueblo, Colorado, approximately 38 nautical miles north of the accident site, reported wind from 200 degrees and 3 knots, visibility 10 miles, skies clear, temperature 90 degrees Fahrenheit (F), dew point 45 F, and a barometric pressure of 30.18 inches of mercury.

Density altitude was calculated to be 9,170 feet.

AIRPORT INFORMATION

The Spanish Peaks Airfield, K4V1, is a non-towered airfield located at an elevation of 6,056 feet. It had two runways: 8-26, and 3-21; the intended landing was to runway 8.

WRECKAGE AND IMPACT INFORMATION

The accident site was located in an open field with sparse vegetation. The site was about 0.3 nautical miles southwest of runway 8. The wreckage was generally aligned on a magnetic heading of 195 degrees. With the exception of small items, the wreckage was confirmed to a small area. Impact signatures were consistent with a nose-low, near vertical impact. The leading edges of both wings displayed accordion-style, rearward, crushing. When compared, the right wing displayed a greater amount of tearing and crushing than the left wing. The forward portion of the fuselage was crushed aft. The empennage was twisted clockwise about 90 degrees and bent to the right. The vertical stabilizer was deformed and bent to the right. The left elevator was torn at the trim tab. The right vertical stabilizer and elevator were crushed and wrinkled. The flap was found in the retracted position. The landing gear was in the extended position. Flight control continuity was established from the flight controls surfaces to the cockpit controls.

Both metal propeller blades remained attached in the propeller hub. In addition, both blades displayed leading edge polishing, curling, and chord-wise scratches. The propeller blades were labeled A and B for documentation purposes only. Blade A was bent about 90 degrees rearward near the 1/3 of the blade's span. Blade B displayed S-bending.

The cockpit instrumentation was impact damaged and largely unreadable, with numerous components separated from their positions. The landing gear handle was found in the down position and the flap handle in the up (or retracted) position.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted on the pilot by the El Paso County Coroner, as authorized by the Huerfano County Coroner. The cause of death was multiple blunt force injuries. The manner of death was ruled an accident.

Forensic toxicology was performed on specimens from the pilot by the FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma. The specimens provided were not suitable for the testing of carbon monoxide or cyanide. No drugs were detected in the specimens. Ethanol was detected, but was determined to be from sources other than ingestion.

Pilot Information

Certificate:	Private	**Age:**	43,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:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	July 11, 2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	July 26, 2011
Flight Time:	500 hours (Total, all aircraft), 50 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	NANCHANG CHINA	**Registration:**	N96YK
Model/Series:	CJ-6A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	1232007
Landing Gear Type:	None	**Seats:**	2
Date/Type of Last Inspection:	March 14, 2013 Annual	**Certified Max Gross Wt.:**	3086 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2718 Hrs at time of accident	**Engine Manufacturer:**	Huosai
ELT:	C91A installed, activated, did not aid in locating accident	**Engine Model/Series:**	6JIA
Registered Owner:	JEFF MORHET LLC	**Rated Power:**	285 Horsepower
Operator:	JEFF MORHET LLC	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KPUB,4729 ft msl	**Distance from Accident Site:**	38 Nautical Miles
Observation Time:	11:53 Local	**Direction from Accident Site:**	10°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.18 inches Hg	**Temperature/Dew Point:**	32°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Undetermined	**Type of Flight Plan Filed:**	None
Destination:	Walsenburg, CO (4V1)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	Spanish Peaks 4V1	**Runway Surface Type:**	Asphalt
Airport Elevation:	6056 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	08	**IFR Approach:**	None
Runway Length/Width:	4506 ft / 60 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	37.694999,-104.796386

Administrative Information

Investigator In Charge (IIC):	Aguilera, Jason
Additional Participating Persons:	Tom Wiesner; FAA FSDO; Denver, CO
Original Publish Date:	November 6, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=84397