



Aviation Investigation Final Report

Location:	FARMINGDALE, New Jersey	Accident Number:	NYC96FA152
Date & Time:	July 18, 1996, 12:15 Local	Registration:	N7557F
Aircraft:	Champion 7GCBC	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation		

Analysis

The pilot of a Champion 7GCBC (Citabria) departed for a banner pickup. He was observed to miss on his first attempted pickup, and he maneuvered the airplane back for another pickup maneuver. At about the time of the pickup, the pilot of another airplane had just turned from crosswind to downwind. The pilot of the other airplane said that he looked and saw the Citabria impact the ground in a nose down and right wing low attitude. The airplane was found with the tow rope still attached, but the banner had never moved. The fuselage was crushed and the wings were bend down so that both wing tips touched the ground. Fuel was found in the fuel tanks and in a line leading to the engine. There was no evidence of a preimpact mechanical failure or malfunction of the airplane. The pilot had recently qualified as a banner tow pilot. Since becoming qualified, he had completed 12 banner pickups. His total flight time was 445 hours.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper handling of the airplane during a banner pickup maneuver, which resulted in a stall/mush and collision with the ground. A factor relating to the accident was: the pilot's lack of experience in the type of operation.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings

1. MANEUVER - INITIATED - PILOT IN COMMAND
2. (C) AIRCRAFT HANDLING - IMPROPER - PILOT IN COMMAND
3. (C) STALL/MUSH - INADVERTENT - PILOT IN COMMAND
4. (F) LACK OF TOTAL EXPERIENCE IN TYPE OPERATION - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On July 18, 1996, about 1215 eastern daylight time, a Champion 7GCBC, N7557F, operated by United Aerial Advertising, of Farmingdale, New Jersey, struck the ground during a banner pickup, at Allaire Airport, Farmingdale. The airplane was destroyed, and the pilot was fatally injured. Visual meteorological conditions prevailed, and no flight plan had been filed for the local banner towing flight which departed a few minutes earlier, and was operated on a waiver under 14 CFR Part 91.

The pilot was making a banner pickup without benefit of ground crew when the accident occurred. According to the operator, the pilot would lay out the banner, and set up the poles. He would make the pickup with the airplane and proceed with the flight.

This was the first flight of the day for the pilot. After laying out the banner, he departed on runway 32 in N7557F. The pickup site was an open field located to the right side of the departure end of runway 32.

A witness who was flying near the accident site, and teaching banner towing pickups, reported:

"...I observed the Citabria that was involved in the accident, depart runway 32 at the first taxi way just north of intersection runway 21-3 and 32...I continued on a right downwind to a right base to final...At this time the Citabria appeared to be on an attempt to pickup a banner. As I climbed out to set up for another practice pickup the Citabria was climbing out behind me without a banner. We continued in the pattern to right downwind with the Citabria somewhere behind my plane. I turned base to final for another practice pickup...As we turned from crosswind to downwind I looked and saw the Citabria impact the ground in about a 20-30 degree nose down and right wing low attitude. I immediately called unicom to advise them of the situation...."

The pilot was taken to a local hospital where he succumbed to his injuries later in the day.

The accident occurred during the hours of daylight at location 40 degrees, 11 minutes North and 74 degrees, 27 minutes West.

PERSONNEL INFORMATION

The pilot was the holder of a commercial pilot certificate for airplane single engine land, and instrument airplane ratings. In addition, he held a glider rating. He was issued a 2nd Class

FAA Airman Medical Certificate on September 21, 1996, with a limitation to wear correctives lenses. In addition, he was issued a Statement of Demonstrated Ability for defective color vision.

According to the pilot's log book which was current through July 14, 1996, he had a total time of 428 hours with 390 hours as pilot-in-command, and 37 hours in the Champion 7GCBC. His last flight review was conducted on December 3, 1996, when he added a glider rating to his commercial pilot certificate. According to FAA records, he had acquired 16.5 hours of glider time with 9.5 of hours a pilot-in-command. No glider times were found in the pilot's log book. The flight time totals displayed in the report was achieved by adding the glider time to his fixed wing time.

AIRCRAFT INFORMATION

The airplane was a 1969 Champion 7GCBC. The last inspection annual inspection occurred April 20, 1996, 58 hours prior to the accident. The last maintenance performed occurred on May 29, 1996, 49 hours prior to the accident, and consisted of work to the wheels, brakes, and flight control systems.

According to the airframe log book records, on May 2, 1990, "...Disassembled airframe, cleaned, primed and painted with zinc chromate. Covered with ceconite 101 IW STC SA-1351-WE and AC 43.13-1 as applicable. See form 337 this date. /S/ Gregory P. Stoke IA 14250446...." A review of log books between this date and the date of the accident failed to find any reference to removal of the flight control cables.

There was no requirement for other than an annual inspection for airplanes involved in banner towing.

WRECKAGE AND IMPACT INFORMATION

The airplane was examined at the accident site on July 19, 1996. The examination revealed that the airplane had impacted the ground in nose low attitude. the fuselage was crushed to about 1/2 its normal height. Both wings remained attached to the fuselage with the outboard sections drooping down and touching the ground. The landing gear was pushed out to the sides.

Fuel was found in both wing tanks, the fuel line leading to the carburetor, and the carburetor. The propeller had separated from the engine. The crankshaft had failed behind the propeller flange with a 45 degree surface on the fracture face. The engine was rotated and compression was found in all cylinders. Spark was found both magnetos. All engine controls were attached.

Flight control continuity was confirmed to all flight control surfaces. Cable breaks were observed in areas where the flight control cables passed through areas of fuselage crushing.

The left and right rudder cables were found to be wearing against a vertical fuselage strut. This was under the fuselage covering. The cable on the right side was worn about 2/3 to 3/4 of the way through. As the cable strands were worn and fractured, the cable started to unwind. When the rudder was pushed to full left, the unwound portion of the cable extended about one inch out of the fabric.

A "G" meter installed in the cockpit registered 11 positive "Gs", and 5 negative "Gs".

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted by Stanley M. Becker, MD, Chief Medical Examiner, Monmouth County, New Jersey, on July 19, 1996.

Toxicological testing conducted by the FAA Civil Aeromedical Institute in Oklahoma City, Oklahoma was negative for drugs and alcohol.

ADDITIONAL INFORMATION

Banner towing operations are conducted under a waiver of 14 CFR Part 91. The issuance of a waiver for banner towing is covered in Chapter 45, of FAA Order 8700.1, General Aviation Operations Inspector Handbook, and Chapter 46 covers their surveillance.

The operator was last surveiled in the spring when the FAA observed one banner pickup. The operator had submitted a training program which was accepted. The operator produced a form upon which was recorded the pilots training. The form was signed by the instructor, and countersigned by the pilot. The form revealed that the pilot had received 5 hours of ground training and 10 hours of flight training.

According to the pilot's log book, the following flights were recorded:

6/30/96	1.4 hours	Touch & Goes, Traffic Pattern	7/1/96	1.1 hours	
	Banner Passes	7/2/96	2.4 hours	More banner passes	7/3/96
	1.8 hours	More practice, then first banner pickup.	Total	6.7 hours	

According to the operator, following the July 3, 1996 flight, all flights were revenue banner towing flights. According to the pilots log book, between July 4, 1996, and July 14, 1996, he had logged 9 flights, with 13 landings recorded.

According to records, from the operator, after being checked out on July 3, 1996, the pilot made 12 banner pickups. The accident occurred during the pickup for the 13th banner flight.

The operator commented he would often observe their pickups after being released,; however, there was no program to in place to monitor and evaluate the pilots progress as he

gained experience.

The aircraft wreckage was released to the owner on July 19, 1996.

Pilot Information

Certificate:	Commercial	Age:	30, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
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 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	September 21, 1995
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	445 hours (Total, all aircraft), 37 hours (Total, this make and model), 400 hours (Pilot In Command, all aircraft), 49 hours (Last 90 days, all aircraft), 41 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Champion	Registration:	N7557F
Model/Series:	7GCBC 7GCBC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Aerobatic; Normal	Serial Number:	225-70
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	April 20, 1996 Annual	Certified Max Gross Wt.:	1650 lbs
Time Since Last Inspection:	58 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3772 Hrs	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-320-A2B
Registered Owner:	UNITED AERIAL ADVERTISING	Rated Power:	150 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	EWR ,18 ft msl	Distance from Accident Site:	27 Nautical Miles
Observation Time:	12:51 Local	Direction from Accident Site:	10°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	32°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(BLM)	Type of Flight Plan Filed:	Unknown
Destination:		Type of Clearance:	None
Departure Time:	12:10 Local	Type of Airspace:	Class G

Airport Information

Airport:	ALLAIR BLM	Runway Surface Type:	
Airport Elevation:	157 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

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:	

Administrative Information

Investigator In Charge (IIC):	Hancock, Robert
Additional Participating Persons:	GEORGE BENNETT; TETERBORO , NJ
Original Publish Date:	April 29, 1997
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=39092

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](#).