



# Aviation Investigation Final Report

<b>Location:</b>	REEDSVILLE, Pennsylvania	<b>Accident Number:</b>	BF093LA097
<b>Date &amp; Time:</b>	May 26, 1993, 11:40 Local	<b>Registration:</b>	N2510Z
<b>Aircraft:</b>	BELLANCA 8GCBC	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE AIRPLANE VEERED OFF THE LEFT SIDE OF THE RUNWAY DURING LANDING ROLLOUT AND ENTERED A DITCH. A GUSTING CROSSWIND EXISTED AT THE TIME. THE PILOT STATED THAT THE AIRPLANE BEGAN A LEFT TURN WHEN THE TAIL WHEEL TOUCHED THE LANDING SURFACE. HE APPLIED RIGHT RUDDER AND RIGHT BRAKE, BUT THE AIRPLANE CONTINUED TO VEER TO THE LEFT. THE TAIL WHEEL STEERING ASSEMBLY WAS EXAMINED AFTER THE ACCIDENT AND FOUND TO BE INOPERATIVE. COMPONENTS INSIDE THE ASSEMBLY WERE EXAMINED AND FOUND TO BE WORN.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: TAILWHEEL LANDING GEAR SYSTEM COMPONENTS FAILING DUE TO THEIR WORN CONDITION RESULTING IN THE LOSS OF GROUND STEERING CAPABILITY. A FACTOR IN THIS ACCIDENT WAS A GUSTING CROSSWIND ENCOUNTERED DURING LANDING ROLL.

## Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER  
Phase of Operation: LANDING - ROLL

### Findings

1. (C) LANDING GEAR, TAILWHEEL ASSEMBLY - WORN
2. (C) LANDING GEAR, STEERING SYSTEM - DISABLED

- 3. (F) WEATHER CONDITION - CROSSWIND
- 4. DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND

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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: LANDING - ROLL

Findings

- 5. AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - BERM

## Factual Information

On May 26, 1993, at 1140 eastern daylight time, a Bellanca 8GCBC airplane, N2510Z, was substantially damaged during landing at the Mifflin County Airport, Reedsville, Pennsylvania. Visual meteorological conditions prevailed and no flight plan was filed. The pilot and passenger were not injured. The personal flight departed Julian, Pennsylvania, and was conducted under 14 CFR 91.

According to an FAA inspector, the pilot landed on the parallel taxiway to runway 6. The taxiway was being used as an auxiliary runway because a glider show was occupying runway 6. During landing rollout, the airplane "veered to the left into a ditch." The right main gear was sheered off and the right wing impacted the ground, bending the spar. The inspector also reported that a "stiff crosswind" prevailed at the time of the accident.

According to the pilot.

"I established a base leg for the taxiway parallel to runway 06 and touched down on this taxiway about 100 feet from the beginning of the hard surface. I touched down on the main gear tail low and at the time the tail wheel touched the hard surface the aircraft began to turn left. I used right rudder to correct this turn to the left but to no avail. As the aircraft was continuing to turn left past the center of the hard surface, I applied right brake which did not stop the continuing turn to the left. The aircraft went down a quite steep embankment to the left of the taxiway that formed a ditch where the right main gear was broken off the aircraft and the propeller contacted the ground . . . ."

At 1146 hours, the reported wind conditions at State College, Pennsylvania, were 300 degrees at 11 knots gusting to 14 knots. State College is located about 17 statute miles from the accident site.

According to the FAA inspector, the steering control on the tail wheel assembly was found to be inoperative during the examination of the wreckage at the accident site. The assembly was removed from the airplane, disassembled and inspected. According to the FAA; "The arm assembly (P/N 3214) was worn and the spring (P/N 3222) was bent aft and had not been tempered."

According to the FAA, the passenger of the airplane, Mr. Joseph M. Bennis, refused to give a statement to the FAA concerning the accident. In violation of 49 CFR 831, Mr. Bennis also began to disassemble the airplane immediately following the accident, while ignoring requests to cease by FAA inspectors.

## Pilot Information

<b>Certificate:</b>	Airline transport; Commercial	<b>Age:</b>	Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Glider	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	May 14, 1992
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	12168 hours (Total, all aircraft), 814 hours (Total, this make and model), 11461 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELLANCA	<b>Registration:</b>	N2510Z
<b>Model/Series:</b>	8GCBC 8GCBC	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	256-77
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	October 1, 1992 Annual	<b>Certified Max Gross Wt.:</b>	1975 lbs
<b>Time Since Last Inspection:</b>	100 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4474 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>		<b>Engine Model/Series:</b>	O-360-C2E
<b>Registered Owner:</b>	KNAUFF & GROVE, INC.	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	KNAUFF & GROVE, INC.	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	UNV ,1239 ft msl	<b>Distance from Accident Site:</b>	17 Nautical Miles
<b>Observation Time:</b>	11:46 Local	<b>Direction from Accident Site:</b>	330°
<b>Lowest Cloud Condition:</b>	Scattered / 4700 ft AGL	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	11 knots / 14 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	300°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	17°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	JULIAN , PA (79N )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(RVL )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	11:20 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	MIFFLIN COUNTY RVL	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	819 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	6	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>	5001 ft / 40 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	40.679412,-77.629722(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Guzzetti, Jeffrey
<b>Additional Participating Persons:</b>	THOMAS J TAYLOR; HARRISBURG , PA
<b>Original Publish Date:</b>	May 17, 1994
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=8775">https://data.nts.gov/Docket?ProjectID=8775</a>

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](#).