



# Aviation Investigation Final Report

<b>Location:</b>	GERMANSVILLE, Pennsylvania	<b>Accident Number:</b>	BF095LA056
<b>Date &amp; Time:</b>	May 31, 1995, 11:00 Local	<b>Registration:</b>	N12JK
<b>Aircraft:</b>	KNOLL-BENSEN                      B-80	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE PILOT REPORTED THAT HE HAD PLANNED TO PRACTICE TAKEOFF AND LANDINGS IN THE TRAFFIC PATTERN; HOWEVER, DURING THE LANDING THE FLARE WAS TOO HIGH, AND THE GYROPLANE TOUCHED DOWN HARD. HE STATED THAT THERE WAS NO MECHANICAL MALFUNCTION AND THE ACCIDENT COULD HAVE BEEN PREVENTED IF HE HAD JUDGED THE GYROPLANE'S ALTITUDE BETTER DURING THE FLARE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the private pilot's misjudged flare, which resulted in a hard landing.

## Findings

Occurrence #1: HARD LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

1. (C) FLARE - MISJUDGED - PILOT IN COMMAND

## Factual Information

On May 31, 1995, at 1100 eastern daylight time, a Knoll-Bensen B-80 gyroplane, N12JK, operated by the registered owner/builder, sustained substantial damage when it touched down abruptly at the Flying "M" Aerodrome, in Germansville, Pennsylvania. The certificated private pilot, the sole occupant, was not injured. Visual meteorological conditions prevailed and a flight plan was not filed. The local flight was conducted under 14 CFR 91, originated from Germansville, Pennsylvania, about 1030.

The pilot reported that he had planned to practice takeoffs and landings in the traffic pattern. He stated that he completed one takeoff successfully, but during landing "...the flare-out was to high... ." The pilot reported that the gyroplane touched down hard resulting in the main rotor striking the tail and the ground. The pilot stated that there was no mechanical malfunction and that the accident could have been prevented if he had judged the aircraft's altitude better during the flare.

According to an FAA Aviation Safety Inspector, the pilot reported that he had not flown the gyroplane for quite a while, and during the landing the gyroplane touched down hard and, "flipped on its side." The aircraft was examined after the accident at the accident site and there was no evidence of mechanical malfunction.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	61, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--w/ waivers/lim	<b>Last FAA Medical Exam:</b>	May 23, 1995
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	550 hours (Total, all aircraft), 100 hours (Total, this make and model), 550 hours (Pilot In Command, all aircraft), 2 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	KNOLL-BENSEN	<b>Registration:</b>	N12JK
<b>Model/Series:</b>	B-80 B-80	<b>Aircraft Category:</b>	Gyroplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	K-1
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	May 15, 1995 Annual	<b>Certified Max Gross Wt.:</b>	550 lbs
<b>Time Since Last Inspection:</b>	2 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	100 Hrs	<b>Engine Manufacturer:</b>	MCCULLOCH
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-100-1
<b>Registered Owner:</b>	JOHN KNOLL	<b>Rated Power:</b>	72 Horsepower
<b>Operator:</b>		<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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots / 10 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	360°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	27°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(PA88)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	FLYING M AERODROME PA88	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	710 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	8	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2370 ft / 100 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>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	40.719009,-75.710533(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Drake-johnson, Beverley
<b>Additional Participating Persons:</b>	MORGAN BROWN; ALLENTOWN , PA
<b>Original Publish Date:</b>	November 30, 1995
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=9049">https://data.ntsb.gov/Docket?ProjectID=9049</a>

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