



Aviation Investigation Final Report

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| Location: | GREENCASTLE, Indiana | Accident Number: | CHI99LA200 |
| Date & Time: | June 26, 1999, 08:30 Local | Registration: | N2152G |
| Aircraft: | Gillmore B&M | BENSON | Aircraft Damage: Substantial |
| Defining Event: | | Injuries: | 1 Serious |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot said that the roll control was lost and while attempting to maneuver for a landing. He said that on approach '... about 200 ft and 400 yards from the threshold of the runway the first violent left bank occurred.' He said he applied controls to counter the bank and the gyroplane '... sluggishly started turning back to the right...' He said that he then began to nose the gyroplane down to gain some airspeed and at that point the engine suffered a loss of power. He said that about 50 feet above ground level, '... the machine made another violent roll to the left and nosed toward the ground.' He said opposite controls did not arrest the roll and the gyroplane impacted the terrain just left of the runway. An examination of the gyroplane subsequent to the accident found that the right cyclic control rod was fractured. The fracture was discolored with corrosion through 90% of the material. All other mechanical anomalies were consistent with impact damage.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of the cyclic control rod. Factors were aircraft control not possible for the pilot.

Findings

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

Findings

1. (C) ROTORCRAFT FLIGHT CONTROL,CYCLIC CONTROL ROD - FRACTURED
2. (F) AIRCRAFT CONTROL - NOT POSSIBLE

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

Factual Information

On June 26, 1999, at 0830 eastern standard time, a Gillmore Benson B&M (amateur built gyroplane), N2152G, departed controlled flight and impacted the terrain near Greencastle, Indiana. The gyroplane sustained substantial damage, while the pilot received serious injuries. The personal 14 CFR part 91 flight was operating in visual meteorological conditions. No flight plan was on file. The local flight departed about 0715.

The pilot said that the roll control was lost and while attempting to maneuver for a landing on runway 18. He said that on approach "... about 200 ft and 400 yards from the threshold of the runway the first violent left bank occurred." He said he applied controls to counter the bank, and the gyroplane "... sluggishly started turning back to the right..." He said that he then began to nose the gyroplane down to gain some airspeed and at that point the engine suffered a loss of power. He said that about 50 feet above ground level, "... the machine made another violent roll to the left and nosed toward the ground." He said that opposite controls did not arrest the roll and the gyroplane impacted the terrain just left of the runway.

An examination of the gyroplane subsequent to the accident found that the right cyclic control rod was fractured. The Federal Aviation Administration inspector found the fracture discolored with corrosion through 90% of the material. He said the rod was necessary to maintain the roll control of the gyroplane. All other mechanical anomalies found were consistent with impact damage, according to the inspector.

Pilot Information

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| Certificate: | Student | Age: | 40, Male |
| Airplane Rating(s): | None | Seat Occupied: | Center |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 Valid Medical--no waivers/lim. | Last FAA Medical Exam: | July 8, 1998 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 130 hours (Total, all aircraft), 4 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Gillmore | Registration: | N2152G |
| Model/Series: | BENSON B&M BENSON B&M | Aircraft Category: | Gyroplane |
| Year of Manufacture: | | Amateur Built: | Yes |
| Airworthiness Certificate: | Experimental (Special) | Serial Number: | 216042 |
| Landing Gear Type: | Tricycle | Seats: | 1 |
| Date/Type of Last Inspection: | Annual | Certified Max Gross Wt.: | 900 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | | Engine Manufacturer: | Subaru |
| ELT: | Not installed | Engine Model/Series: | EA81-TURBO |
| Registered Owner: | JOHN E. GILLMORE | Rated Power: | 107 Horsepower |
| Operator: | | Operating Certificate(s) Held: | None |
| Operator Does Business As: | | Operator Designator Code: | |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|---------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | | Distance from Accident Site: | |
| Observation Time: | | Direction from Accident Site: | |
| Lowest Cloud Condition: | Clear | Visibility | |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 5 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 230° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | | Temperature/Dew Point: | 24°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | (417) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 07:15 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|-------------------|----------------------------------|---------------------------|
| Airport: | PUTNAM COUNTY 4I7 | Runway Surface Type: | Asphalt |
| Airport Elevation: | 820 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 18 | IFR Approach: | None |
| Runway Length/Width: | 5000 ft / 100 ft | VFR Approach/Landing: | Full stop;Traffic pattern |

Wreckage and Impact Information

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|----------------------------|-----------|-----------------------------|-------------------------|
| Crew Injuries: | 1 Serious | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Serious | Latitude, Longitude: | 39.6399,-86.840644(est) |

Administrative Information

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| Investigator In Charge (IIC): | Wilson, Stephen |
| Additional Participating Persons: | ERIC S CHAPMAN; INDIANAPOLIS , IN |
| Original Publish Date: | November 30, 2000 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=46625 |

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