



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | WILLIAMSTOWN, New Jersey | Accident Number: | NYC96LA118 |
| Date & Time: | June 1, 1996, 16:30 Local | Registration: | N8186G |
| Aircraft: | Piper PA-32R | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 3 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that while in cruise flight at 2500 feet ' . . . just past the [Cedar Lake] VOR . . . there was a loud 'pop' from the engine compartment and an immediate loss of power.' During a subsequent forced landing, the aircraft struck a large fence post causing the right wing to separate. The aircraft rotated 90 degrees and the landing gear collapsed. Examination of the aircraft revealed the magneto had disconnected from the accessory gear box. An inspection disclosed the upper magneto hold down stud was intact and the associated hardware consisting of the nut, washer, lock washer, and hold-down clip were installed; however, the same pieces of hardware for the lower hold down stud were missing. Also noted was that a significant section of the magneto housing hold-down flange was fractured.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: inadequate maintenance, which resulted in a failure of the magneto housing hold-down flange, a disconnect of the magneto from the engine, and loss of engine power. The obstruction (fence post) in the emergency landing area was a related factor.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) MAINTENANCE - INADEQUATE - PILOT IN COMMAND
2. (C) IGNITION SYSTEM,MAGNETO - FAILURE
3. (C) IGNITION SYSTEM,MAGNETO - DISCONNECTED

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: EMERGENCY LANDING

Findings

4. (F) OBJECT - FENCE POST

Factual Information

On June 1, 1996, at about 1630 eastern daylight time, a Piper PA-32R, N8186G, was substantially damaged during a forced landing near Williamstown, New Jersey. The private pilot and two passengers were not injured. The personal flight originated from Kinston, North Carolina (ISO), at 1400 with Trenton, New Jersey as the intended destination. Visual meteorological conditions prevailed at the time of the accident, no flight plan was filed.

The pilot reported that while in cruise flight at 2500 feet "...just past the [Cedar Lake] VOR ...there was a loud 'pop' from the engine compartment and an immediate loss of power." The pilot said he trimmed the airplane for best glide speed, located the nearest airport with his Loran, and turned the airplane to the heading provided by the Loran. The front seat passenger announced over the Trenton tower frequency the engine power loss, aircraft location, and aircraft status throughout the forced landing sequence.

The pilot explained that he chose a "...large pair of adjoining fields..." for landing when he could not visually confirm the airport cited by the Loran, and after he determined that all other airport options were outside of the airplane's gliding distance. He said, "We touched down near the end of the first field, which was separated from the second field by a barbed wire fence. Unfortunately, one of the posts was, as I learned later, a large railroad tie. The right wing struck the post at the location of the inner fuel tank, causing separation of the tank and other significant damage to the right wing. The impact turned the plane about 90 degrees, the landing gear collapsed, and the plane skidded on its belly to a stop in the middle of the second field."

Examination of the aircraft revealed the magneto had disconnected from the accessory gear box. The inspection disclosed the magneto hold down stud was intact and the associated hardware consisting of the nut, washer, lock washer, and hold-down clip were installed; however, the same pieces of hardware for the lower hold down stud were missing. Also noted was a significant section of magneto housing hold-down flange was fractured.

Pilot Information

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|----------------------------------|---|--|-------------|
| Certificate: | Private | Age: | 53, Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | Airplane | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 Valid Medical-w/ waivers/lim | Last FAA Medical Exam: | May 8, 1995 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 2106 hours (Total, all aircraft), 1109 hours (Total, this make and model), 1903 hours (Pilot In Command, all aircraft), 32 hours (Last 90 days, all aircraft), 29 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|-------------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Piper | Registration: | N8186G |
| Model/Series: | PA-32R PA-32R | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 32R8029079 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 6 |
| Date/Type of Last Inspection: | July 1, 1995 Annual | Certified Max Gross Wt.: | 3600 lbs |
| Time Since Last Inspection: | 96 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 2955 Hrs | Engine Manufacturer: | Lycoming |
| ELT: | Installed, activated | Engine Model/Series: | TIO-540-S1AD |
| Registered Owner: | COURTER FILMS & ASSOCIATES | Rated Power: | 300 Horsepower |
| Operator: | PHILIP R. COURTER | 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: | MIV ,86 ft msl | Distance from Accident Site: | 12 Nautical Miles |
| Observation Time: | 16:00 Local | Direction from Accident Site: | 217° |
| Lowest Cloud Condition: | Clear | Visibility | 20 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 13 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 170° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 22°C / 6°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | KINSTON , NC (ISO) | Type of Flight Plan Filed: | None |
| Destination: | TRENTON , NJ (TTN) | Type of Clearance: | None |
| Departure Time: | 14:30 Local | Type of Airspace: | Class G |

Airport Information

| | | | |
|-----------------------------|---|----------------------------------|----------------|
| Airport: | | Runway Surface Type: | |
| Airport Elevation: | | Runway Surface Condition: | |
| Runway Used: | 0 | IFR Approach: | |
| Runway Length/Width: | | VFR Approach/Landing: | Forced landing |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|-------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | 2 None | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 3 None | Latitude, Longitude: | |

Administrative Information

Investigator In Charge (IIC): Jones, Dennis

Additional Participating Persons:

Original Publish Date: May 30, 1997

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=39190>

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](#).