



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | WALES, Maine | Accident Number: | NYC00LA051 |
| Date & Time: | December 12, 1999, 15:30 Local | Registration: | N5279Z |
| Aircraft: | Piper PA-22-108 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

During the initial climb after takeoff, the airplane's engine sputtered, and then lost total power. The pilot initiated a right turn and performed a forced landing to a field. After the accident, 5 gallons of fuel was drained from the left fuel tank, and 7 gallons of fuel was drained from the right fuel tank. Examination of the airplane's fuel system revealed a total blockage in the left fuel tank's aft feed line in the vicinity a bend near the fuel tank connection. According to the FAA Inspector's report, '...the bend in the line was clogged with what appeared to be hard packed sand...'. There were no other pre-impact discrepancies noted. The pilot said he had selected the left fuel tank for the takeoff, as per the Airplane's Operating Handbook. Additionally, the pilot stated that the airplane had been flown for about 15 to 20 hours since it's most recent annual inspection, which was performed about 2 months before the accident. For about 6 weeks prior to the annual inspection, the airplane was parked in a 'T-Hangar' with both wings removed.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel exhaustion due to a blocked fuel feed line.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) FUEL SYSTEM,LINE - BLOCKED(TOTAL)
2. FLUID,FUEL - STARVATION

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: NOSE OVER

Phase of Operation: LANDING - ROLL

Factual Information

On December 12, 1999, about 1530 Eastern Standard Time, a Piper PA-22-108, N5279Z, was substantially damaged during a forced landing, after it lost engine power during the initial climb after takeoff from the Wales Airport, Wales, Maine. The certificated commercial pilot and passenger were not injured. Visual meteorological conditions prevailed and no flight plan had been filed for the flight destined for the Twitchell Airport, Turner, Maine. The personal flight was conducted under 14 CFR Part 91.

The airplane departed Runway 04, a 2,100 foot long, 80 foot wide turf runway.

According to the pilot, when the airplane reached about 200 feet above the ground, the airplane's engine sputtered, and then lost total power. The pilot initiated a right turn and performed a forced landing to a field.

During the landing the airplane contacted the top of a knoll and nosed over.

Examination of the wreckage was conducted by a Federal Aviation Administration (FAA) inspector. After the accident, 5 gallons of fuel was drained from the left fuel tank, and 7 gallons of fuel was drained from the right fuel tank. Examination of the airplane's fuel system revealed a total blockage in the left fuel tank's aft feed line in the vicinity a bend near the fuel tank connection. According to the FAA Inspector's report, "...the bend in the line was clogged with what appeared to be hard packed sand...." There were no other pre-impact discrepancies noted.

In a follow-up interview, the pilot said he had selected the left fuel tank for the takeoff, as per the Airplane's Operating Handbook. Additionally, the pilot stated that the airplane had been flown for about 15 to 20 hours since it's most recent annual inspection, which was performed on October 22, 1999. For about 6 weeks prior to the annual inspection, the airplane was parked in a "T-Hangar" with both wings removed.

Pilot Information

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|----------------------------------|--|--|-----------------|
| Certificate: | Commercial | Age: | 58, Male |
| Airplane Rating(s): | Single-engine land; Multi-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 2 Valid Medical-w/ waivers/lim | Last FAA Medical Exam: | October 6, 1998 |
| Occupational Pilot: | UNK | Last Flight Review or Equivalent: | |
| Flight Time: | 1234 hours (Total, all aircraft), 92 hours (Total, this make and model), 1189 hours (Pilot In Command, all aircraft), 8 hours (Last 30 days, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Piper | Registration: | N5279Z |
| Model/Series: | PA-22-108 PA-22-108 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 22-8974 |
| Landing Gear Type: | Tricycle | Seats: | 2 |
| Date/Type of Last Inspection: | October 22, 1999 Annual | Certified Max Gross Wt.: | 1600 lbs |
| Time Since Last Inspection: | 20 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | | Engine Manufacturer: | Lycoming |
| ELT: | Installed, not activated | Engine Model/Series: | O-320 |
| Registered Owner: | JAMES S. ELDER | Rated Power: | 150 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: | LEW ,288 ft msl | Distance from Accident Site: | 16 Nautical Miles |
| Observation Time: | 15:55 Local | Direction from Accident Site: | 240° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 7 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 320° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 4°C / -3°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | (ME6) | Type of Flight Plan Filed: | None |
| Destination: | TURNER , ME (3B5) | Type of Clearance: | None |
| Departure Time: | 15:30 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|-----------------|----------------------------------|----------------|
| Airport: | WALES ME6 | Runway Surface Type: | Grass/turf |
| Airport Elevation: | 210 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 4 | IFR Approach: | None |
| Runway Length/Width: | 2100 ft / 80 ft | VFR Approach/Landing: | Forced landing |

Wreckage and Impact Information

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

Administrative Information

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| Investigator In Charge (IIC): | Schiada, Luke |
| Additional Participating Persons: | TED DOMIN; PORTLAND , ME |
| Original Publish Date: | March 2, 2001 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=47894 |

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](#).