



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Lopez, Washington | Accident Number: | WPR11LA340 |
| Date & Time: | July 16, 2011, 18:30 Local | Registration: | N5532P |
| Aircraft: | Piper PA-24-250 | Aircraft Damage: | Substantial |
| Defining Event: | Loss of engine power (partial) | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that, during cruise flight, he heard a loud bang and felt a vibration. The cockpit filled with smoke, and oil covered the windshield, both of which compromised the pilot's view. He opened a side vent window and regained visibility. The pilot chose to land on a nearby landing strip. During the landing roll, the pilot realized that the strip was short and wet, so he intentionally placed the airplane in a "ground slide." Before the airplane came to a stop, its left wing struck a fence post, which caused structural damage to the airplane. The pilot reported that, during his postaccident examination of the airplane, he observed a crack in the engine case near the rear cylinder on the engine's left side. No further examination was accomplished.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A partial loss of engine power due to a cracked engine case near the rear cylinder.

Findings

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| Aircraft | Recip eng cyl section - Damaged/degraded |
| Environmental issues | Fence/fence post - Contributed to outcome |

Factual Information

History of Flight

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| Enroute-cruise | Loss of engine power (partial) (Defining event) |
| Landing-landing roll | Collision with terr/obj (non-CFIT) |

On July 16, 2011, at 1830 Pacific daylight time, a Piper PA-24-250, N5532P, experienced a loss of engine power during cruise flight. The pilot subsequently made a forced landing to a private grass strip near Lopez, Washington. The owner/pilot operated the airplane under the provisions of 14 Code of Federal Regulations Part 91 as a personal cross-country flight. The commercial pilot, the sole occupant, was not injured. During the landing roll, the left wing was substantially damaged when it struck a fence post. Visual meteorological conditions prevailed for the flight that departed Roche Harbor Airport (WA09), Roche Harbor, Washington, at 1815. The flight was destined for Frontier Airpark (WN53), Lake Stevens, Washington. No flight plan had been filed.

The pilot reported that the airplane was in cruise flight about 2,000 feet near Spencer Island. He heard a loud bang, felt an extreme vibration, had smoke in the cockpit, and oil covered the windshield. He reduced engine power to idle, opened the side vent window, and was able to regain visibility. He chose the closest landing strip, and landed the airplane. On the landing rollout, the pilot stated that the grass strip was shorter than what he would need to bring the airplane to a stop and the runway surface was wet. He intentionally placed the airplane in a "ground slide," and prior to coming to a stop, the left wing struck a fence post.

During the post-accident inspection of the engine, the pilot observed a crack in the engine block near the rear cylinder on the pilot's side. No further examination was accomplished.

Pilot Information

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| Certificate: | Commercial | Age: | 59 |
| 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 Without waivers/limitations | Last FAA Medical Exam: | June 2, 2010 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | September 16, 2010 |
| Flight Time: | 2100 hours (Total, all aircraft), 1000 hours (Total, this make and model), 2016 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft) | | |

Aircraft and Owner/Operator Information

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| Aircraft Make: | Piper | Registration: | N5532P |
| Model/Series: | PA-24-250 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 24-596 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | October 15, 2010 Annual | Certified Max Gross Wt.: | |
| Time Since Last Inspection: | 35 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 6200 Hrs as of last inspection | Engine Manufacturer: | LYCOMING |
| ELT: | Installed, not activated | Engine Model/Series: | O-540-A1D5 |
| Registered Owner: | On file | Rated Power: | 250 Horsepower |
| Operator: | On file | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | FHR,113 ft msl | Distance from Accident Site: | 6 Nautical Miles |
| Observation Time: | 18:36 Local | Direction from Accident Site: | 80° |
| Lowest Cloud Condition: | Scattered / 2800 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | Broken / 3600 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29.8 inches Hg | Temperature/Dew Point: | 19°C / 16°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Roche Harbor, WA (WA09) | Type of Flight Plan Filed: | None |
| Destination: | Lake Stevens, WA (WN53) | Type of Clearance: | None |
| Departure Time: | 18:15 Local | Type of Airspace: | |

Airport Information

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| Airport: | Windsock Airport 4WA4 | Runway Surface Type: | Grass/turf |
| Airport Elevation: | 30 ft msl | Runway Surface Condition: | Wet |
| Runway Used: | 20 | IFR Approach: | None |
| Runway Length/Width: | 1800 ft / 50 ft | VFR Approach/Landing: | Forced landing |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|----------------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 48.541389,-122.887222(est) |

Administrative Information

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| Investigator In Charge (IIC): | Cornejo, Tealeye |
| Additional Participating Persons: | Clifton Peterson; Federal Aviation Administration; Seattle, WA |
| Original Publish Date: | May 13, 2015 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=81174 |

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](#).