



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Pompano Beach, Florida | Accident Number: | ERA18LA102 |
| Date & Time: | March 1, 2018, 10:51 Local | Registration: | N54476 |
| Aircraft: | Piper PA 32-300 | Aircraft Damage: | Substantial |
| Defining Event: | Aerodynamic stall/spin | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that, shortly after takeoff while climbing through 800 ft mean sea level (msl), the engine manifold pressure began to drop, and the engine “sounded irregular.” The pilot initiated a return to the airport and requested to land. The pilot and pilot-rated passenger reported that the engine did not respond when the throttle was reduced during the landing approach. The airplane continued toward the runway at high speed and touched down within the last third of the runway surface, where it bounced several times.

The pilot first pulled the mixture control to idle/cut off, but when the engine did not respond, richened the mixture, applied full throttle, and initiated an aborted landing. The airplane became airborne, entered a right bank, and began to descend before impacting the ramp near a hangar, resulting in substantial damage. The wind conditions at the time of the accident were consistent with a quartering tailwind of about 8 knots for the landing runway.

Examination of the engine revealed no anomalies, and the reasons for the initial loss of manifold pressure could not be determined based on the available information. However, the circumstances of the accident are consistent with the pilot’s exceedance of the airplane’s critical angle of attack after the airplane became airborne, which resulted in an aerodynamic stall, loss of control, and impact with the ramp.

Probable Cause and Findings

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

The pilot's exceedance of the airplane's critical angle of attack during an aborted landing, which resulted in an aerodynamic stall, loss of control, and impact with terrain. Contributing to the accident was the pilot's failure to maintain a proper approach and landing speed during a precautionary landing following a loss of manifold pressure for reasons that could not be determined.

Findings

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|-----------------------------|---|
| Personnel issues | Aircraft control - Pilot |
| Aircraft | Angle of attack - Not attained/maintained |
| Aircraft | Descent/approach/glide path - Not attained/maintained |
| Aircraft | (general) - Unknown/Not determined |
| Aircraft | Airspeed - Not attained/maintained |
| Environmental issues | Tailwind - Effect on equipment |

Factual Information

History of Flight

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|--|---|
| Landing-aborted after touchdown | Attempted remediation/recovery |
| Initial climb | Aerodynamic stall/spin (Defining event) |
| Uncontrolled descent | Collision with terr/obj (non-CFIT) |

On March 1, 2018, about 1051 eastern standard time, a Piper PA-32-300 airplane, N54476, was substantially damaged when it was involved in an accident near Pompano Beach, Florida. The private pilot and passenger were not injured. The flight was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

During departure, while climbing through 800 ft mean sea level (msl), the pilot observed the engine manifold pressure falling and stated that it “sounded irregular.” The pilot-rated passenger told the pilot to “turn back,” after which the pilot informed air traffic control that they needed to return and land. The controller issued a clearance to land on runway 28. The pilot estimated that when the airplane touched down, the groundspeed was high and there was a “substantial” quartering tailwind.

Both the pilot and passenger reported that, during landing, the engine appeared to be developing full power, the throttle was unresponsive, and they were unable to reduce power. After touching down and bouncing several times, the pilot pulled the mixture to the idle/cut off position, but when there was not an immediate response, he attempted to take off again because the airplane was nearing the end of the runway. After applying full power and full-rich mixture, the airplane lifted off. The pilot entered an immediate turn to the right to stay over the airport and away from a hangar. The airplane climbed briefly, then started to descend as it continued banking to the right, then impacted the ground in front of a hangar about 1,000 ft northwest of the departure end of runway 28. The airplane skidded across the pavement and impacted two fences before coming to rest upright.

Both the tower controller who witnessed the landing and the pilot-rated passenger reported that the approach speed was high, and they may have touched down late. The controller further stated the touchdown was in the last third of the runway.

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that the outboard sections of both wings sheared off, the landing gear separated, and the engine partially separated from the firewall. Examination of the engine revealed no anomalies.

Pilot Information

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|----------------------------------|---|--|------------------|
| Certificate: | Private | Age: | 50, Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | Unknown |
| Instrument Rating(s): | None | Second Pilot Present: | Yes |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 With waivers/limitations | Last FAA Medical Exam: | February 4, 2018 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 375 hours (Total, all aircraft), 11.9 hours (Total, this make and model), 18.2 hours (Last 90 days, all aircraft) | | |

Pilot-rated passenger Information

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|----------------------------------|---------------------------------------|--|----------|
| Certificate: | Private | Age: | 61, Male |
| Airplane Rating(s): | Single-engine land; Multi-engine land | Seat Occupied: | Right |
| Other Aircraft Rating(s): | None | Restraint Used: | Unknown |
| Instrument Rating(s): | Airplane | Second Pilot Present: | Yes |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 With waivers/limitations | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--|---------------------------------------|-----------------|
| Aircraft Make: | Piper | Registration: | N54476 |
| Model/Series: | PA 32-300 300 | Aircraft Category: | Airplane |
| Year of Manufacture: | 1973 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 32-7440055 |
| Landing Gear Type: | Tricycle | Seats: | 6 |
| Date/Type of Last Inspection: | January 12, 2018 Annual | Certified Max Gross Wt.: | 3400 lbs |
| Time Since Last Inspection: | 47 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | at time of accident | Engine Manufacturer: | LYCOMING |
| ELT: | C91 installed, activated, did not aid in locating accident | Engine Model/Series: | TIO-540 KI85 |
| Registered Owner: | | Rated Power: | 310 Horsepower |
| Operator: | | 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: | PMP, 19 ft msl | Distance from Accident Site: | 0 Nautical Miles |
| Observation Time: | 10:53 Local | Direction from Accident Site: | |
| Lowest Cloud Condition: | Few / 2600 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 8 knots / | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | 150° | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | 30.05 inches Hg | Temperature/Dew Point: | 26°C / 19°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Pampano Beach, FL (PMP) | Type of Flight Plan Filed: | VFR |
| Destination: | Marsh Harbour, OF (MYAM) | Type of Clearance: | Unknown |
| Departure Time: | 10:30 Local | Type of Airspace: | Class D |

Airport Information

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|-----------------------------|---------------------------|----------------------------------|-----------------------------------|
| Airport: | POMPANO BEACH AIRPARK PMP | Runway Surface Type: | Asphalt |
| Airport Elevation: | 19 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 28 | IFR Approach: | None |
| Runway Length/Width: | 3502 ft / 100 ft | VFR Approach/Landing: | Precautionary landing;Straight-in |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|----------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | 1 None | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 None | Latitude, Longitude: | 26.248611,-80.118057 |

Administrative Information

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| Investigator In Charge (IIC): | Mccarter, Lawrence | |
| Additional Participating Persons: | Francis Lauderborn; FAA; Miramar, FL | |
| Original Publish Date: | January 20, 2022 | Investigation Class: 3 |
| Note: | The NTSB did not travel to the scene of this accident. | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=96866 | |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).