



# Aviation Investigation Factual Report

|                                |   |                         |             |
|--------------------------------|---|-------------------------|-------------|
| <b>Location:</b>               | New Market, Virginia                    | <b>Accident Number:</b> | ERA20LA055  |
| <b>Date &amp; Time:</b>        | December 15, 2019, 13:00 Local          | <b>Registration:</b>    | N1984A      |
| <b>Aircraft:</b>               | Piper PA18                              | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         | Abnormal runway contact                 | <b>Injuries:</b>        | 1 None      |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Positioning |                         |             |

## Factual Information

On December 15, 2019, about 1300 eastern standard time, a Piper PA-18A, N1984A, was substantially damaged when it was involved in an accident while landing at the New Market Airport (8W2), New Market, Virginia. The pilot was not injured. The airplane was operated as Title 14 *Code of Federal Regulations* Part 91 positioning flight.

The pilot reported that the purpose of the flight was to deliver the airplane from its previous owner to its new owner and that he had just landed "uneventfully" and purchased fuel at 8W2. After he purchased fuel, he completed a traffic pattern at 8W2, and planned a stop-and-go landing on runway 24 before continuing to Lonesome Pine Airport (LNP), Wise, Virginia.

According to the pilot, "I rounded out over the runway numbers and touched down approximately 150 feet past the threshold. As soon as the wheels touched the ground, the airplane immediately rolled right and pitched forward." The pilot made remedial flight control and braking inputs to maintain aircraft control "with no effect." The airplane continued 100 ft past its touchdown point and came to rest facing about 200° with the tailwheel on the runway centerline. The right main landing gear leg and the right main landing gear shock/dampener fractured, and the airplane rested on the left main gear, the tailwheel, and the right wing, which was substantially damaged.

The pilot held a commercial pilot certificate with ratings for airplane single engine land, multiengine land, and instrument airplane. His most recent Federal Aviation Administration (FAA) first class medical certificate was issued December 6, 2019. The pilot reported 768 total hours of flight experience, of which 4 hours were in the accident airplane make and model.

According to FAA records, the airplane was manufactured in 1952 and was powered by a Lycoming O-320-B2B 160-horsepower engine. Its most recent annual inspection was completed August 1, 2019 at 4,343.9 total aircraft hours, and the airplane had accrued 23 hours since that date.

The pilot reported that, other than the landing gear collapse, there was nothing wrong with the performance and handling of the airplane.

The right main landing gear leg and the right main landing gear shock/dampener were retained and examined by an NTSB Materials Research Engineer. The examination revealed no pre-impact anomalies with the dampener or the gear leg, and that the fracture surfaces of each displayed features consistent with overload failure.

## Pilot Information

|                                  |  |  |                  |
|----------------------------------|--|--|------------------|
| <b>Certificate:</b>              | Commercial   | <b>Age:</b>                              | 23,Male          |
| <b>Airplane Rating(s):</b>       | Single-engine land; Multi-engine land  | <b>Seat Occupied:</b>                    | Front            |
| <b>Other Aircraft Rating(s):</b> | None   | <b>Restraint Used:</b>                   | 4-point          |
| <b>Instrument Rating(s):</b>     | Airplane   | <b>Second Pilot Present:</b>             | No               |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             | No               |
| <b>Medical Certification:</b>    | Class 1 With waivers/limitations   | <b>Last FAA Medical Exam:</b>            | December 6, 2019 |
| <b>Occupational Pilot:</b>       | Yes  | <b>Last Flight Review or Equivalent:</b> |                  |
| <b>Flight Time:</b>              | 768 hours (Total, all aircraft), 4 hours (Total, this make and model), 689 hours (Pilot In Command, all aircraft), 98 hours (Last 90 days, all aircraft), 26 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) |  |                  |

## Aircraft and Owner/Operator Information

|                                      |                                  |                                       |                 |
|--------------------------------------|----------------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | Piper                            | <b>Registration:</b>                  | N1984A          |
| <b>Model/Series:</b>                 | PA18 A                           | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          | 1952                             | <b>Amateur Built:</b>                 |                 |
| <b>Airworthiness Certificate:</b>    | Normal                           | <b>Serial Number:</b>                 | 18-1808         |
| <b>Landing Gear Type:</b>            | Tailwheel                        | <b>Seats:</b>                         | 2               |
| <b>Date/Type of Last Inspection:</b> | August 21, 2019 Annual           | <b>Certified Max Gross Wt.:</b>       | 1499 lbs        |
| <b>Time Since Last Inspection:</b>   |                                  | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | 4343.9 Hrs as of last inspection | <b>Engine Manufacturer:</b>           | Lycoming        |
| <b>ELT:</b>                          | Installed                        | <b>Engine Model/Series:</b>           | O-320-B2B       |
| <b>Registered Owner:</b>             | On file                          | <b>Rated Power:</b>                   | 160 Horsepower  |
| <b>Operator:</b>                     | On file                          | <b>Operating Certificate(s) Held:</b> | None            |

## Meteorological Information and Flight Plan

|   |                                  |   |            |
|---|----------------------------------|---|------------|
| <b>Conditions at Accident Site:</b>     | Visual (VMC)                     | <b>Condition of Light:</b>                  | Day        |
| <b>Observation Facility, Elevation:</b> | 8W2,903 ft msl                   | <b>Distance from Accident Site:</b>         |            |
| <b>Observation Time:</b>                | 12:55 Local                      | <b>Direction from Accident Site:</b>        |            |
| <b>Lowest Cloud Condition:</b>          | Scattered / 5500 ft AGL          | <b>Visibility</b>                           | 10 miles   |
| <b>Lowest Ceiling:</b>                  | None                             | <b>Visibility (RVR):</b>                    |            |
| <b>Wind Speed/Gusts:</b>                | 9 knots / 16 knots               | <b>Turbulence Type Forecast/Actual:</b>     | /          |
| <b>Wind Direction:</b>                  | 260°                             | <b>Turbulence Severity Forecast/Actual:</b> | /          |
| <b>Altimeter Setting:</b>               | 29.97 inches Hg                  | <b>Temperature/Dew Point:</b>               | 9°C / -4°C |
| <b>Precipitation and Obscuration:</b>   | No Obscuration; No Precipitation |   |            |
| <b>Departure Point:</b>                 | Newmarket, VA (8W2 )             | <b>Type of Flight Plan Filed:</b>           | None       |
| <b>Destination:</b>                     | Newmarket, VA (8W2 )             | <b>Type of Clearance:</b>                   | None       |
| <b>Departure Time:</b>                  | 12:56 Local                      | <b>Type of Airspace:</b>                    | Class G    |

## Airport Information

|                             |                        |                                  |                 |
|-----------------------------|------------------------|----------------------------------|-----------------|
| <b>Airport:</b>             | New Market Airport 8W2 | <b>Runway Surface Type:</b>      | Asphalt         |
| <b>Airport Elevation:</b>   | 963 ft msl             | <b>Runway Surface Condition:</b> | Dry             |
| <b>Runway Used:</b>         | 24                     | <b>IFR Approach:</b>             | None            |
| <b>Runway Length/Width:</b> | 2920 ft / 60 ft        | <b>VFR Approach/Landing:</b>     | Traffic pattern |

## Wreckage and Impact Information

|                            |        |                             |                          |
|----------------------------|--------|-----------------------------|--------------------------|
| <b>Crew Injuries:</b>      | 1 None | <b>Aircraft Damage:</b>     | Substantial              |
| <b>Passenger Injuries:</b> |        | <b>Aircraft Fire:</b>       | None                     |
| <b>Ground Injuries:</b>    | N/A    | <b>Aircraft Explosion:</b>  | None                     |
| <b>Total Injuries:</b>     | 1 None | <b>Latitude, Longitude:</b> | 38.656112,-78.70861(est) |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Rayner, Brian   |
| <b>Additional Participating Persons:</b> | Bob Nolan; FAA/FSDO; Washington, DC   |
| <b>Report Date:</b>                      | April 22, 2020  |
| <b>Last Revision Date:</b>               |   |
| <b>Investigation Class:</b>              | <a href="#">Class 3</a>   |
| <b>Note:</b>                             | The NTSB did not travel to the scene of this accident.  |
| <b>Investigation Docket:</b>             | <a href="https://data.nts.gov/Docket?ProjectID=100693">https://data.nts.gov/Docket?ProjectID=100693</a> |

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