



# Aviation Investigation Final Report

|                                |                                      |                         |             |
|--------------------------------|--------------------------------------|-------------------------|-------------|
| <b>Location:</b>               | Somerset, Pennsylvania               | <b>Accident Number:</b> | ERA18TA266  |
| <b>Date &amp; Time:</b>        | September 30, 2018, 14:20 Local      | <b>Registration:</b>    | N4001F      |
| <b>Aircraft:</b>               | Cessna 172                           | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         | Nose over/nose down                  | <b>Injuries:</b>        | 1 None      |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Personal |                         |             |

## Analysis

During the airplane's first flight after an annual inspection, the commercial pilot practiced touch-and-go landings and then flew the airplane for about 1.5 hours before returning to the airport. While on final approach to land, he reduced the engine power. The pilot stated that after the airplane touched down on the runway, it was traveling too fast to stop before the end of the runway but not fast enough to abort the landing. Subsequently, the airplane continued off the end of the runway, down an embankment, and came to rest inverted about 150 ft from the departure end of the runway. Postaccident examination of the brakes revealed no anomalies, and the pilot reported that there were no mechanical malfunctions or failures of the airplane that would have precluded normal operation. The pilot stated that he lands farther down the runway during full-stop landings because his hangar is at the far end of the runway. Thus, it is likely that the pilot landed the airplane too far down the runway and that it was traveling too fast to prevent a runway overrun.

## Probable Cause and Findings

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

The pilot's decision to land with insufficient runway remaining to stop, which resulted in a runway overrun.

## Findings

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|                         |   |
|-------------------------|---|
| <b>Aircraft</b>         | Surface speed/braking - Incorrect use/operation |
| <b>Personnel issues</b> | Aircraft control - Pilot                        |
| <b>Personnel issues</b> | Decision making/judgment - Pilot                |

## Factual Information

### History of Flight

|                      |                                      |
|----------------------|--------------------------------------|
| Landing-landing roll | Runway excursion                     |
| Landing-landing roll | Nose over/nose down (Defining event) |

On September 30, 2018, about 1420 eastern daylight time, a Cessna 172, N4001F, was substantially damaged after it overran the runway while landing at Somerset County Airport (2G9), Somerset, Pennsylvania. The commercial pilot was not injured. Visual meteorological conditions prevailed, and no flight plan was filed for the local flight, which originated around 1215. The personal flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91.

According to the pilot, he was practicing touch-and-go landings during the airplane's first flight since its annual inspection. He then departed the airport, flew locally for about 1.5 hours, and returned to the airport to land on runway 25. He noted a 6 knot left crosswind, and while on final approach, he reduced the engine power to perform the landing. When the airplane was at the end of the 5,000 ft-long runway, the pilot knew that it was traveling too fast to stop prior to the end of the runway, but not fast enough to abort the landing. The airplane continued off the end of the runway, down an embankment, and came to rest inverted about 150 ft from the end of the runway.

During the accident sequence, the airplane sustained substantial damage to the forward section of the fuselage and the vertical stabilizer.

During a telephone interview, the pilot reported that when doing a full stop landing, he lands further down the runway since his hangar is at the far end of the runway.

The 1415 recorded weather observation at the 2G9 included wind from 140° at 6 knots, visibility 10 statute miles, clear skies, temperature 20° C, dew point 11° C; barometric altimeter 30.31 inches of mercury.

A Federal Aviation Administration inspector examined the brakes after the accident revealed that no anomalies were noted. In addition, the pilot reported that there were no mechanical failures or malfunctions of the airplane prior to the accident that would have precluded normal operation.

## Pilot Information

|                                  |                     |  |              |
|----------------------------------|---------------------|--|--------------|
| <b>Certificate:</b>              | Commercial; Private | <b>Age:</b>                              | 68, Male     |
| <b>Airplane Rating(s):</b>       | Single-engine land  | <b>Seat Occupied:</b>                    | Unknown      |
| <b>Other Aircraft Rating(s):</b> | Balloon             | <b>Restraint Used:</b>                   | Unknown      |
| <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>    | BasicMed None       | <b>Last FAA Medical Exam:</b>            | July 6, 2017 |
| <b>Occupational Pilot:</b>       | No                  | <b>Last Flight Review or Equivalent:</b> |              |
| <b>Flight Time:</b>              |                     |  |              |

## Aircraft and Owner/Operator Information

|                                      |  |                                       |                 |
|--------------------------------------|--|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | Cessna   | <b>Registration:</b>                  | N4001F          |
| <b>Model/Series:</b>                 | 172 Undesignat   | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          | 1958   | <b>Amateur Built:</b>                 |                 |
| <b>Airworthiness Certificate:</b>    | Normal   | <b>Serial Number:</b>                 | 36901           |
| <b>Landing Gear Type:</b>            | Tricycle   | <b>Seats:</b>                         | 4               |
| <b>Date/Type of Last Inspection:</b> | September 21, 2018 Annual                                  | <b>Certified Max Gross Wt.:</b>       | 2299 lbs        |
| <b>Time Since Last Inspection:</b>   | 2 Hrs  | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | 3458 Hrs at time of accident                               | <b>Engine Manufacturer:</b>           | Continental     |
| <b>ELT:</b>                          | C91 installed, activated, did not aid in locating accident | <b>Engine Model/Series:</b>           | O-300-A         |
| <b>Registered Owner:</b>             | On file  | <b>Rated Power:</b>                   | 145 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> | 2G9,2275 ft msl                  | <b>Distance from Accident Site:</b>         | 19 Nautical Miles |
| <b>Observation Time:</b>                | 14:15 Local                      | <b>Direction from Accident Site:</b>        | 27°               |
| <b>Lowest Cloud Condition:</b>          | Clear                            | <b>Visibility</b>                           | 10 miles          |
| <b>Lowest Ceiling:</b>                  | None                             | <b>Visibility (RVR):</b>                    |                   |
| <b>Wind Speed/Gusts:</b>                | 6 knots / None                   | <b>Turbulence Type Forecast/Actual:</b>     | /                 |
| <b>Wind Direction:</b>                  | 140°                             | <b>Turbulence Severity Forecast/Actual:</b> | /                 |
| <b>Altimeter Setting:</b>               | 30.3 inches Hg                   | <b>Temperature/Dew Point:</b>               | 20°C / 11°C       |
| <b>Precipitation and Obscuration:</b>   | No Obscuration; No Precipitation |   |                   |
| <b>Departure Point:</b>                 | Somerset, PA (2G9 )              | <b>Type of Flight Plan Filed:</b>           | None              |
| <b>Destination:</b>                     | Somerset, PA (2G9 )              | <b>Type of Clearance:</b>                   | VFR               |
| <b>Departure Time:</b>                  | 12:15 Local                      | <b>Type of Airspace:</b>                    |                   |

## Airport Information

|                             |                     |                                  |                           |
|-----------------------------|---------------------|----------------------------------|---------------------------|
| <b>Airport:</b>             | Somerset County 2G9 | <b>Runway Surface Type:</b>      | Asphalt                   |
| <b>Airport Elevation:</b>   | 2275 ft msl         | <b>Runway Surface Condition:</b> | Dry                       |
| <b>Runway Used:</b>         | 25                  | <b>IFR Approach:</b>             | None                      |
| <b>Runway Length/Width:</b> | 5002 ft / 75 ft     | <b>VFR Approach/Landing:</b>     | Full stop;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> | 40.034442,-79.023887(est) |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Kemner, Heidi   |
| <b>Additional Participating Persons:</b> | Gary Ankney; FAA/FSDO; Allentown, PA  |
| <b>Original Publish Date:</b>            | February 11, 2020   |
| <b>Last Revision Date:</b>               |   |
| <b>Investigation Class:</b>              | <a href="#">Class</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=98380">https://data.nts.gov/Docket?ProjectID=98380</a> |

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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](#).