



National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Carrollton, Georgia | Accident Number: | GAA17CA032 |
| Date & Time: | October 20, 2016, 11:10 Local | Registration: | N601UK |
| Aircraft: | Smith Aerostar601 | Aircraft Damage: | Substantial |
| Defining Event: | Fuel exhaustion | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that the purpose of the flight was to reposition the airplane to another airport for refuel. During preflight, he reported that the airplane's two fuel gauges read "low," but the supplemental electronic fuel totalizer displayed 55 total gallons. He further reported that it is not feasible to visual check the fuel quantity, because the fueling ports are located near the wingtips and the fuel quantity cannot be measured with any "external measuring device." According to the pilot, his planned flight was 20 minutes and the fuel quantity, as indicated by the fuel totalizer, was sufficient.

The pilot reported that about 12 nautical miles from the destination airport, both engines began to "surge" and subsequently lost power. During the forced landing, the pilot deviated to land in grass between a highway, the airplane touched down hard, and the landing gear collapsed.

The fuselage and both wings sustained substantial damage.

The pilot reported no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

The pilot reported in the National Transportation Safety Board Pilot/ Operator Aircraft Accident Report that there was a "disparity" between the actual fuel quantity and the fuel quantity set in the electronic fuel totalizer. He further reported that a few days before the accident, he set the total fuel totalizer quantity to full after refueling, but in hindsight, he did not believe the fuel tanks were actually full because the wings may not have been level during the fueling.

The "Preflight" chapter within the operating manual for the fuel totalizer in part states: "Digiflo-L is a fuel flow measuring system and NOT a quantity-sensing device. A visual inspection and positive determination of the usable fuel in the fuel tanks is a necessity. Therefore, it is imperative that the determined available usable fuel be manually entered into the system."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to verify the usable fuel in the fuel tanks, which resulted in an inaccurate fuel totalizer setting during preflight, fuel exhaustion, and a total loss of engine power.

Findings

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| Personnel issues | Fuel planning - Pilot |
| Aircraft | Fuel indication system - Incorrect use/operation |
| Aircraft | Fuel - Inadequate inspection |
| Personnel issues | Aircraft control - Pilot |
| Aircraft | Descent rate - Not attained/maintained |

Factual Information

History of Flight

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|-------------------------|------------------------------------|
| Enroute-cruise | Fuel exhaustion (Defining event) |
| Landing-flare/touchdown | Hard landing |
| Landing-flare/touchdown | Landing gear collapse |
| Landing-flare/touchdown | Collision with terr/obj (non-CFIT) |

Pilot Information

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|---------------------------|---|-----------------------------------|------------------|
| Certificate: | Commercial; Private | Age: | 35, Male |
| Airplane Rating(s): | Single-engine land; Multi-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | Unknown |
| Instrument Rating(s): | Airplane | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | None None | Last FAA Medical Exam: | July 5, 2011 |
| Occupational Pilot: | UNK | Last Flight Review or Equivalent: | January 24, 2016 |
| Flight Time: | (Estimated) 1338 hours (Total, all aircraft), 36 hours (Total, this make and model) | | |

Aircraft and Owner/Operator Information

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|-------------------------------|--------------------------------|--------------------------------|-----------------|
| Aircraft Make: | Smith | Registration: | N601UK |
| Model/Series: | Aerostar601 P | Aircraft Category: | Airplane |
| Year of Manufacture: | 1974 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 61P-0183-012 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 6 |
| Date/Type of Last Inspection: | April 3, 2016 100 hour | Certified Max Gross Wt.: | 6000 lbs |
| Time Since Last Inspection: | | Engines: | 2 Reciprocating |
| Airframe Total Time: | 2236.4 Hrs at time of accident | Engine Manufacturer: | LYCOMING |
| ELT: | Installed | Engine Model/Series: | IO-540-S1A5 |
| Registered Owner: | | Rated Power: | 290 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: | KCTJ, 1164 ft msl | Distance from Accident Site: | 15 Nautical Miles |
| Observation Time: | 15:15 Local | Direction from Accident Site: | 30° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | / None |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | / N/A |
| Altimeter Setting: | 30.1 inches Hg | Temperature/Dew Point: | 27° C / 17° C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | HAMPTON, GA (HMP) | Type of Flight Plan Filed: | None |
| Destination: | CARROLLTON, GA (CTJ) | Type of Clearance: | None |
| Departure Time: | 11:00 Local | Type of Airspace: | Class G |

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: | 33.565555, -85.053054(est) |

Administrative Information

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| Investigator In Charge (IIC): | Gerhardt, Adam |
| Additional Participating Persons: | Bob Lohr; FAA; Atlanta, GA |
| Original Publish Date: | January 18, 2017 |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=94250 |

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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](#).