



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Panama City, Florida | Accident Number: | GAA18CA419 |
| Date & Time: | June 30, 2018, 16:45 Local | Registration: | N89887 |
| Aircraft: | Cessna 152 | Aircraft Damage: | Substantial |
| Defining Event: | Fuel exhaustion | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that, 15 minutes into a cross-country flight, the airplane's engine lost rpm. He added power, and the engine regained rpm briefly before losing all power. The pilot selected a dirt road for an emergency landing, during which the nose landing gear touched down on a soft surface, and the airplane nosed over.

The airplane sustained substantial damage to the left and right wings and the front windshield.

The pilot reported that the airplane had 4.5 gallons of fuel on board at the last takeoff. A Federal Aviation Administration inspector reported that, during postaccident examination of the airplane, the fuel tanks were found empty. The gascolator had residual fuel, and about 1 gallon of fuel was removed from the fuselage fuel drain. He added that, according to the manufacturer's specifications, the airplane should have had 1.5 gallons of unusable fuel. He turned on the airplane's master power switch to view the fuel quantity gauge indications, and the left-wing tank gauge indicated between empty and a quarter full with no fuel in the tank, and the right-wing fuel tank gauge indicated empty.

Probable Cause and Findings

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

The pilot's improper preflight fuel planning, which resulted in fuel exhaustion and a subsequent total loss of engine power.

Findings

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| Aircraft | Fuel - Fluid level |
| Personnel issues | Fuel planning - Pilot |
| Environmental issues | Soft surface - Contributed to outcome |

Factual Information

History of Flight

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|----------------|----------------------------------|
| Enroute | Fuel exhaustion (Defining event) |
| Enroute | Loss of engine power (total) |
| Enroute | Off-field or emergency landing |
| Landing | Nose over/nose down |

Pilot Information

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|----------------------------------|--|--|------------------|
| Certificate: | Private | Age: | 25,Male |
| Airplane Rating(s): | Single-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: | Class 1 With waivers/limitations | Last FAA Medical Exam: | November 3, 2017 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | June 25, 2018 |
| Flight Time: | (Estimated) 198 hours (Total, all aircraft), 67 hours (Total, this make and model), 134 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|----------------------------------|---------------------------------------|--------------------|
| Aircraft Make: | Cessna | Registration: | N89887 |
| Model/Series: | 152 No Series | Aircraft Category: | Airplane |
| Year of Manufacture: | 1978 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 15282904 |
| Landing Gear Type: | Tricycle | Seats: | 2 |
| Date/Type of Last Inspection: | October 26, 2017 Annual | Certified Max Gross Wt.: | 1669 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 6735.7 Hrs as of last inspection | Engine Manufacturer: | Lycoming |
| ELT: | C91A installed, not activated | Engine Model/Series: | O-235-L26 |
| Registered Owner: | | Rated Power: | 125 Horsepower |
| Operator: | On file | Operating Certificate(s) Held: | Pilot school (141) |

Meteorological Information and Flight Plan

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|---|------------------------|---|----------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | KECP, 69 ft msl | Distance from Accident Site: | 3 Nautical Miles |
| Observation Time: | 10:45 Local | Direction from Accident Site: | 94° |
| Lowest Cloud Condition: | | Visibility | 10 miles |
| Lowest Ceiling: | | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | | Temperature/Dew Point: | 32°C / 26°C |
| Precipitation and Obscuration: | | | |
| Departure Point: | Destin, FL (DTS) | Type of Flight Plan Filed: | None |
| Destination: | Panama City, FL (ECP) | Type of Clearance: | VFR flight following |
| Departure Time: | 10:30 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: | 30.3525,-85.84111(est) |

Administrative Information

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| Investigator In Charge (IIC): | Swenson, Eric |
| Additional Participating Persons: | Nina McBride; FAA; Vestavia Hills, AL |
| Original Publish Date: | March 18, 2019 |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=97753 |

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](#).