



Aviation Investigation Final Report

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| Location: | Los Lunas, New Mexico | Accident Number: | CEN09LA345 |
| Date & Time: | June 9, 2009, 09:30 Local | Registration: | N43598 |
| Aircraft: | Curtiss Moses Aerolite | Aircraft Damage: | Substantial |
| Defining Event: | Collision with terr/obj (non-CFIT) | Injuries: | 1 Serious |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The sport pilot was flying his airplane near the home of one of his relatives. The engine "stalled" as he passed over the residence and he decided to land on a gravel road, but changed the intended landing area to an open field. While approaching the field for a landing, the airplane collided with a hidden obstruction. An examination of the airplane and engine was conducted by an inspector from the Federal Aviation Administration (FAA). The fuel selector was found selected to an empty fuel tank, while the other fuel tank contained approximately 2.5 gallons of fuel. Under supervision by the FAA, the engine was started and ran normally under various power settings. Examination of the airplane and engine did not disclose any evidence of a mechanical malfunction.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to fuel starvation as a result of the pilot's fuel mismanagement.

Findings

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| Aircraft | Fuel - Fluid management |
| Aircraft | Fuel selector/shutoff valve - Incorrect use/operation |
| Personnel issues | Use of equip/system - Pilot |

Factual Information

History of Flight

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|-------------------|---|
| Maneuvering | Fuel starvation |
| Maneuvering | Loss of engine power (total) |
| Emergency descent | Collision with terr/obj (non-CFIT) (Defining event) |

On June 9, 2009, approximately 0930 mountain daylight time, a home-built Aerolite 103, N43598, was substantially damaged during a forced landing following a loss of engine power near Los Lunas, New Mexico. The sport pilot was seriously injured. The airplane was owned and operated by the pilot. Visual meteorological conditions prevailed and no flight plan was filed for the Title 14 Code of Federal Regulations Part 91 personal flight.

According to a statement provided by the pilot, he was flying his airplane near the home of one of his relatives. The engine "stalled" as he passed over the residence and he decided to land on a nearby gravel road. However, during the attempt, the pilot decided that he could not land safely on the road, so he made a "sharp right turn" and descended towards an open field. During the landing, he collided with an obstruction that was later described as a brown metal pipe that was approximately 3 to 4 feet high.

A Federal Aviation Administration (FAA) inspector responded to the accident scene and established flight control continuity to all control surfaces. The airplane was equipped with two 5-gallon "red gas containers" utilized as fuel tanks. One tank contained approximately 2.5 gallons of fuel, while the other tank was empty. The fuel selector was discovered selecting the empty tank. The engine was removed from the airplane and mounted on a stand. Under supervision of the FAA, the engine was run successfully under various power settings. An inspection of the airframe and other airplane systems failed to reveal any anomalies.

Pilot Information

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| Certificate: | Sport Pilot | Age: | 75,Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Single |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Sport pilot | Last FAA Medical Exam: | |
| Occupational Pilot: | UNK | Last Flight Review or Equivalent: | |
| Flight Time: | 571 hours (Total, all aircraft), 14 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|-----------------------------|---------------------------------------|------------------|
| Aircraft Make: | Curtiss Moses | Registration: | N43598 |
| Model/Series: | Aerolite 103 | Aircraft Category: | Ultralight |
| Year of Manufacture: | | Amateur Built: | Yes |
| Airworthiness Certificate: | Experimental (Special) | Serial Number: | AAWI012502115R44 |
| Landing Gear Type: | Tricycle | Seats: | 1 |
| Date/Type of Last Inspection: | January 15, 2009 Annual | Certified Max Gross Wt.: | 600 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 427 Hrs at time of accident | Engine Manufacturer: | Rotax |
| ELT: | Not installed | Engine Model/Series: | 503 |
| Registered Owner: | On file | Rated Power: | 50 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: | ABQ,5355 ft msl | Distance from Accident Site: | 18 Nautical Miles |
| Observation Time: | 08:56 Local | Direction from Accident Site: | 9° |
| Lowest Cloud Condition: | Few / 9000 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | Broken / 11000 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | 5 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 240° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30.12 inches Hg | Temperature/Dew Point: | 20°C / -2°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Los Lunas, NM (E58) | Type of Flight Plan Filed: | None |
| Destination: | Los Lunas, NM | Type of Clearance: | None |
| Departure Time: | Type of Airspace: | | |

Wreckage and Impact Information

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|----------------------------|-----------|-----------------------------|----------------------------|
| Crew Injuries: | 1 Serious | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Serious | Latitude, Longitude: | 34.810508,-106.730834(est) |

Administrative Information

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| Investigator In Charge (IIC): | Aguilera, Jason |
| Additional Participating Persons: | Lonnie B Jeffcoat; FAA FSDO; Albuquerque, NM Eric Tucker; Rotax Engine Company; Nassau, FL |
| Original Publish Date: | December 29, 2009 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=73993 |

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).