



Aviation Investigation Final Report

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| Location: | San Antonio, Texas | Accident Number: | CEN12LA371 |
| Date & Time: | June 9, 2012, 12:15 Local | Registration: | N319NP |
| Aircraft: | AMEN STAR LITE | Aircraft Damage: | Substantial |
| Defining Event: | Loss of engine power (partial) | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that the airplane’s engine operated normally during the engine run-up and takeoff ground run. However, after takeoff, at an altitude of about 150 feet above ground level, the engine lost power. The pilot turned the airplane back toward the airport in an attempt to reach the runway. A hard landing was made in the grass alongside the runway. The landing gear collapsed, and the airplane continued to slide onto the runway before coming to rest. The airplane’s wings and fuselage were substantially damaged.

A postaccident examination revealed that pieces of a sealant coating that was applied to the inside of the fuel tank had dislodged. The pilot believed that the coating dislodged because the coating in that area (the curvature where the side and bottom of the fuel tank meet) had not properly cured after he applied it 6 years before the accident. Pieces of this coating were found inside the fuel pump, which likely prevented fuel flow to the engine.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The separation of the fuel tank sealant coating, which traveled into the fuel pump, blocked the fuel flow, and resulted in fuel starvation to the engine.

Findings

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| Aircraft | Fuel storage - Damaged/degraded |
| Aircraft | Fuel - Not specified |
| Aircraft | Fuel pump - Not specified |

Factual Information

History of Flight

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| Takeoff | Loss of engine power (partial) (Defining event) |
| Landing-flare/touchdown | Hard landing |

On June 9, 2012, at 1215 central daylight time, an amateur-built Amen Star Lite, N319NP, experienced a hard forced landing following a loss of engine power shortly after takeoff from the San Geronimo Airpark (8T8), San Antonio, Texas. The pilot was not injured. The airplane was substantially damaged. The 14 Code of Federal Regulations Part 91 personal flight was operating in visual meteorological conditions without a flight plan. The local flight originated just prior to the accident.

The pilot reported the engine operated normally during the engine run-up and takeoff ground run. After takeoff, at an altitude of about 150 feet above ground level, the engine lost power. The pilot lowered the nose of the airplane and used the fuel primer which resulted in several "short bursts" of power. The pilot turned the airplane back toward the airport in an attempt to reach the runway. A hard landing was made in the grass alongside the runway. The pilot stated the landing gear absorbed most of the impact forces and the main gear departed the airplane. The airplane continued to slide 20 feet on the grass then it continued onto the runway where it slid another 300 feet prior to coming to a stop. The airplane received substantial damage to the wings and fuselage.

A postaccident examination of the airplane and engine was conducted during which pieces of a foreign material were found inside the fuel pump. The material was yellow in color. There was also a stain on the fuel filter which matched the color of the material found inside the fuel pump. Examination of the fuel tank revealed that a 3/4 inch area of a coating that was applied to the inside of the fuel tank was missing in an area where the side of the tank met the bottom of the tank. This coating appeared to match the color of the material found inside the fuel pump.

The airplane had a dark (black/brown) coating applied inside the fuel tank when it was built in 2004. The kit manufacturer determined that there was a problem with the fuel softening this coating and recommended that the aircraft owners apply a different type of coating, which was yellow, to the inside of the fuel tank. The aircraft owner, who was also the pilot, reported that he applied this new coating to the fuel tank approximately 6 years before the accident. He believed that the dislodged sealant coating occurred because he did not ensure that the coating was properly cured in the curvature where the side and bottom of the tank meet.

Pilot Information

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| Certificate: | Private | Age: | 57, 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: | Class 3 With waivers/limitations | Last FAA Medical Exam: | November 17, 2011 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | January 27, 2012 |
| Flight Time: | 558 hours (Total, all aircraft), 155 hours (Total, this make and model), 510 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft) | | |

Aircraft and Owner/Operator Information

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| Aircraft Make: | AMEN | Registration: | N319NP |
| Model/Series: | STAR LITE | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | Yes |
| Airworthiness Certificate: | Experimental (Special) | Serial Number: | 1 |
| Landing Gear Type: | Tailwheel | Seats: | 1 |
| Date/Type of Last Inspection: | September 26, 2011 Annual | Certified Max Gross Wt.: | 555 lbs |
| Time Since Last Inspection: | 17 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 155 Hrs | Engine Manufacturer: | ROTAX |
| ELT: | Not installed | Engine Model/Series: | 447 |
| Registered Owner: | AMEN NELSON P | Rated Power: | 40 Horsepower |
| Operator: | AMEN NELSON P | 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: | SKF,690 ft msl | Distance from Accident Site: | 16 Nautical Miles |
| Observation Time: | 11:55 Local | Direction from Accident Site: | 124° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29.86 inches Hg | Temperature/Dew Point: | 28°C / 20°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | San Antonio, TX (8T8) | Type of Flight Plan Filed: | None |
| Destination: | San Antonio, TX (8T8) | Type of Clearance: | None |
| Departure Time: | 12:15 Local | Type of Airspace: | Class E |

Airport Information

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| Airport: | San Geronimo Airpark 8T8 | Runway Surface Type: | Asphalt |
| Airport Elevation: | | Runway Surface Condition: | Unknown |
| Runway Used: | 35 | IFR Approach: | Unknown |
| Runway Length/Width: | 3000 ft / 40 ft | VFR Approach/Landing: | Forced landing |

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: | |
| Total Injuries: | 1 None | Latitude, Longitude: | 29.510278,-98.798332(est) |

Administrative Information

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| Investigator In Charge (IIC): | Sullivan, Pamela |
| Additional Participating Persons: | Carlos Balderas; FAA-FSDO; San Antonio, TX |
| Original Publish Date: | June 12, 2013 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=83980 |

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](#).