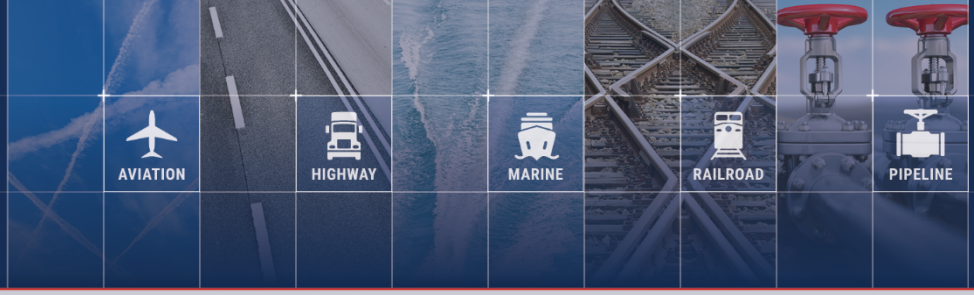

Aviation Investigation Final Report

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

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

Factual Information

History of Flight

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

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

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

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

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

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

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.ntsb.gov/Docket?ProjectID=83980