Aviation Investigation Final Report

Location:	MCCLURE, Pennsylvania	**Accident Number:**	IAD01LA007
Date & Time:	October 21, 2000, 11:00 Local	**Registration:**	N279W
Aircraft:	Cessna 140	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane experienced a total loss of engine power about 1 hour after departure. The pilot performed a forced landing to a cornfield and the airplane nosed over during the landing roll. When the airplane was uprighted during recovery, fuel poured from both fuel tanks. The engine was then started and it ran without interruption. However, examination of the fuel system revealed a handful of sloshing-sealant particles blocked the fuel strainer in the left fuel tank. Examination of the airplane's maintenance records revealed the left fuel tank was sealed with sloshing sealant during a major repair 43 years prior to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power over unsuitable terrain due to fuel starvation from a fuel strainer blocked with sealant particles.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE

Findings
1. (C) FLUID,FUEL - BLOCKED(TOTAL)

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: NOSE OVER
Phase of Operation: EMERGENCY LANDING

Findings
2. (C) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On October 21, 2000, at 1100 eastern daylight time, a Cessna 140, N279W, was substantially damaged when it nosed over in a cornfield following a forced landing in McClure, Pennsylvania. The certificated commercial pilot was not injured. Visual meteorological conditions prevailed for the personal flight that originated at the Queen City Municipal Airport (1N9), Allentown, Pennsylvania. No flight plan was filed for the flight conducted under 14 CFR Part 91, and destined for the University Park Airport, State College, Pennsylvania.

In a telephone interview, the pilot said the purpose of the flight was to deliver the airplane to its owner in Oceanside, California. He explained that because the airplane had not been flown for about 2 months, he performed a thorough preflight inspection of the airplane that took approximately 1 hour to complete. The pilot said the fuel gauges indicated full tanks, and that he removed both fuel caps and dipped his fingers in the fuel to verify the level in the tanks. He said that he drew a fuel sample from three points on the airplane and that the sample was clear, and absent of water and debris.

The pilot said the only discrepancy noted was that the airplane's tires were under-inflated.

The pilot said that prior to departing on the first leg of his trip, he took off from Queen City, completed a traffic pattern, and landed the airplane to a full stop. He then departed, climbed to 4,500 feet, and leveled the airplane on a course for State College.

The pilot reported that he was in cruise flight for approximately 1 hour and in the vicinity of Selinsgrove, Pennsylvania, when the engine stopped producing power. He said:

"I was passing Selinsgrove heading direct to University Park when the power failed - total power failure. There were no landable fields in front of me, so I turned around. I was on the left tank, so I tried the right. I checked the primer, carburetor heat, and the mixture. At the same time, I was setting up for more landable terrain. I was unable to restart the engine."

The pilot said he attempted to set the transponder to 'emergency' and transmitted a 'Mayday' call on the radio during the descent. He said:

"The field I had chosen was probably the only one landable, but it was marginal. It was a fallow field between two cornfields. There were wires at the approach end and trees at the other end. I dropped it in - in a big slip. I could see I was going to run over into the trees so I went diagonally into the corn. There was corn on either side. I went into the corn and was decelerating nicely, but then I must have hit a rut and the plane flipped over."

The pilot stated that, other than the loss of engine power, there were no mechanical

deficiencies with the airplane. He added that he escaped injury during the accident because of the dual shoulder harness configuration of his seatbelt.

Examination of fuel records revealed the airplane was last serviced on September 3, 2000, with 9.9 gallons of 100LL aviation gasoline. The fuel log stated the airplane was filled "to the tabs." Examination of maintenance records revealed the last maintenance entry was made October 11, 2000, at 910.9 hours on the tachometer.

The tachometer reading at the accident site was 912.4 hours.

A Federal Aviation Administration (FAA) aviation safety inspector examined the airplane on October 21, 2000. The airplane came to rest inverted, and all major components were accounted for at the scene. In a telephone interview, the inspector said the wings were removed during recovery of the airplane and fuel spilled past the fuel caps.

According to the inspector, the right wing tank contained approximately 9 gallons of fuel and the left wing tank contained 8 ounces of fuel. Continuity of the fuel system was established from the wing roots, through the fuel selector, to the engine. A small tank of fuel was plumbed into the system, and the engine started and ran continuously without interruption for approximately 10 minutes.

In a telephone interview, the airplane's owner said the fuel capacity for each fuel tank was 12.5 gallons, and that the airplane's average fuel consumption rate was 6 gallons per hour.

According to the inspector, examination of the left fuel tank revealed the tank's interior had been sealed with "sloshing sealant." He said the fuel strainer in the left wing was partially occluded with particles of sealant. The inspector said he then flushed the tank and drained a "handful" of particles that were up to 1/2 inch in diameter. He said, "The particles were rubbery and easily stretched."

The airplane was a 1946 Cessna 140. Examination of the airplane's maintenance records revealed a Civil Aeronautics Administration Major Repair and Alteration Form 337 dated April 5, 1957 that documented the use of sloshing sealant in the left fuel tank.

The pilot held a commercial pilot's certificate with ratings for airplane multi-engine land, single engine land, single engine sea, and instrument airplane. He also held a flight instructor's certificate with ratings for airplane single engine land, instrument airplane, and glider.

The pilot reported 1,783 hours of flight experience, 107 hours of which were in the Cessna 140. He said he had approximately 60 hours of flight experience in N279W.

The weather in Selinsgrove, Pennsylvania, at the time of the accident was calm winds and clear skies with 5 miles visibility in haze.

Pilot Information

Certificate:	Commercial	**Age:**	56,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):		**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; Glider; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	December 1, 1998
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	February 16, 2000
Flight Time:	1783 hours (Total, all aircraft), 107 hours (Total, this make and model), 1704 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N279W
Model/Series:	140 140	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	9976
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	February 28, 2000 Annual	**Certified Max Gross Wt.:**	1450 lbs
Time Since Last Inspection:	12 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	7179 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	O-200
Registered Owner:	BARRY GELERNT	**Rated Power:**	100 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SEG,450 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	11:53 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Clear	**Visibility**	5 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/ None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	18°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ALLENTOWN, PA (1N9)	**Type of Flight Plan Filed:**	None
Destination:	STATE COLLEGE, PA (UNV)	**Type of Clearance:**	None
Departure Time:	10:50 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

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:**	40.746112,-77.290275

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	FRANK GURISH; FAA; HARRISBURG, PA
Original Publish Date:	February 7, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=50508