



Aviation Investigation Final Report

Location:	Eagles Mere, Pennsylvania	Accident Number:	ERA15LA279
Date & Time:	July 23, 2015, 18:00 Local	Registration:	NC13776
Aircraft:	Kinner SPORTSTER B	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot reported that the airplane had undergone a complete restoration and had been flown for about 8 hours in the 9 months before the accident. He added that, about 1 week before the accident, the airplane experienced a loss of engine power on takeoff but that he was able to land the airplane without incident. A carburetor anomaly was found that appeared to have produced an overly rich mixture and was subsequently corrected.

On the day of the accident, an engine run was performed to verify that there were no operational issues. The pilot subsequently took off for the local personal flight, climbed the airplane to 50 ft above the runway, and then landed uneventfully. He then took off again, and when the airplane climbed to about 150 ft above the runway, the engine stopped, and the pilot then performed an off-airport forced landing. During the landing, the fuel tank ruptured, and the engine broke away from the fuselage. Subsequent examination of the airframe and engine revealed no evidence of any preimpact mechanical anomalies that would have precluded normal operation.

The weather conditions at the time of the accident were conducive to the formation of serious carburetor icing at glide power. The airplane had carburetor heat, but the pilot reported that he did not use it in flight or on the ground. Although the formation of carburetor icing was highly unlikely under a full-power takeoff, it could have formed during the low-power taxi and then broken off or melted due to the added engine heat from the higher takeoff power. However, with no substantive evidence that carburetor ice had formed, the reason for the loss of power could not be determined.

Probable Cause and Findings

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

The total loss of engine power for reasons that could not be determined because postaccident examination of the airframe and engine did not reveal any anomalies that would have precluded normal operation.

Findings

Not determined	(general) - Unknown/Not determined
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Factual Information

History of Flight

Initial climb	Loss of engine power (total) (Defining event)
Emergency descent	Loss of engine power (total)

On July 23, 2015, about 1800 eastern daylight time, a Kinner Sportster B, NC13776, was substantially damaged during a forced landing at Merritt Field (4PN7), Eagles Mere, Pennsylvania. The private pilot was not injured. Visual meteorological conditions prevailed, and no flight plan had been filed. The local personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91.

According to the pilot, the airplane had undergone a 7-year restoration, which was completed during October 2014, and at the time of the accident, had logged about 8 hours of flight time since then.

The pilot further noted that on July 18, 2015, after an earlier flight that day, the airplane's Kinner B-5 engine lost power on takeoff, but the pilot was able successfully land the airplane. "We found gas running out of the carburetor and believed the float was stuck. The engine appeared to have drowned by virtue of the rich mixture."

The airplane was subsequently hangared, and the following week, the carburetor was cleaned and inspected. "The float was determined to be intact but the float valve was not seating perfectly. It was removed, blued, reseated, reblued, and tested. The carburetor was reinstalled and found to still be leaking."

The carburetor was then removed and re-examined, and the float was found to be "slightly sticking. A modest portion of material was removed from the float bowl where the sticking was occurring, the carburetor was checked in multiple angles, it was reinstalled. It no longer leaked or flooded. Two separate IA's inspected the work."

On the day of the accident, the airplane was tied down and the engine run for "an extended period at full throttle [later stated to be 8 to 10 minutes] to verify there were no operational issues. Fuel was confirmed at 3/4 tank."

The pilot subsequently took off, climbed the airplane to 50 feet above the runway, and landed straight-ahead on the runway to confirm no anomalies. He then made another takeoff, and about 150 feet above the runway, the engine stopped. The airplane was then not in a position to land on the runway, so the pilot landed off runway, and during the landing, the fuel tank ruptured and the engine broke away from the fuselage.

The engine was sent to an overhauler/builder, who did not find any preexisting mechanical anomalies. The pilot also confirmed that the Holley carburetor main metering jet had not dropped out, as had occurred in another accident, NTSB accident number WPR15FA121.

The pilot further confirmed that the airplane did have carburetor heat, but that he did not use it in flight – including the short takeoff and landing flight, and the accident flight.

The nearest recorded weather, at an airport 20 nautical miles to the southwest, about the time of the accident and about 1,500 feet lower elevation, included a temperature of 26 degrees C and a dew point of 12 degrees C. Although not specific to any particular carburetor, a carburetor icing probability chart found in Federal Aviation Administration Special Airworthiness Information Bulletin CE-09-35, indicated that under the likely ambient conditions at 4PN7, there was a probability of "serious icing at glide power."

Pilot Information

Certificate:	Private	Age:	63, Male
Airplane Rating(s):	Single-engine land; Multi-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	May 9, 2015
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 21, 2014
Flight Time:	2500 hours (Total, all aircraft), 2 hours (Total, this make and model), 50 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Kinner	Registration:	NC13776
Model/Series:	SPORTSTER B	Aircraft Category:	Airplane
Year of Manufacture:	1934	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	102
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	October 25, 2014 Annual	Certified Max Gross Wt.:	1875 lbs
Time Since Last Inspection:	8 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2000 Hrs at time of accident	Engine Manufacturer:	KINNER
ELT:	C126 installed, not activated	Engine Model/Series:	B5 SERIES
Registered Owner:		Rated Power:	125 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	IPT, 528 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	21:54 Local	Direction from Accident Site:	240°
Lowest Cloud Condition:	Few / 6500 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.89 inches Hg	Temperature/Dew Point:	26°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Eagles Mere, PA (4PN7)	Type of Flight Plan Filed:	None
Destination:	Eagles Mere, PA (4PN7)	Type of Clearance:	None
Departure Time:	18:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	Merritt Field 4PN7	Runway Surface Type:	Grass/turf
Airport Elevation:	2000 ft msl	Runway Surface Condition:	Dry
Runway Used:	6	IFR Approach:	None
Runway Length/Width:	3400 ft / 50 ft	VFR Approach/Landing:	None

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:	41.420833,-76.534446(est)

Administrative Information

Investigator In Charge (IIC):	Cox, Paul
Additional Participating Persons:	Thomas G McCormick; FAA/FSDO; Rochester, NY
Original Publish Date:	February 13, 2017
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=91623

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