



Aviation Investigation Final Report

Location:	Rhinebeck, New York	Accident Number:	ERA11LA434
Date & Time:	July 31, 2011, 15:45 Local	Registration:	N51SV
Aircraft:	Nord STAMPE SV4C	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Air race/show		

Analysis

The pilot was participating in an air show display known as a "bombing routine." Preflight and ground operations were normal, and the airplane departed with about 12 gallons of fuel on board. During one of the bombing passes, the engine made a "pop" sound and lost power. The pilot attempted to recover power with throttle movements without success. He checked the fuel valve and magnetos, but was unable to restart the engine. During a forced landing, the airplane clipped trees and came to rest, inverted, at the edge of a stand of trees near the runway. A postaccident examination of the engine revealed no evidence of an engine malfunction or failure. It was noted that, at the time of the accident, the airplane was being operated in conditions conducive to carburetor icing at glide and cruise power. The reason for the loss of engine power could not be determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A total loss of engine power for undetermined reasons.

Findings

Not determined	(general) - Unknown/Not determined
Aircraft	(general) - Failure

Factual Information

History of Flight

Maneuvering-low-alt flying	Loss of engine power (total) (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)

On July 31, 2011, about 1545 eastern daylight time, a Nord Stampe SV4C, N51SV, was substantially damaged following a loss of engine power and collision with terrain at Old Rhinebeck Airport (NY94), Rhinebeck, New York. The commercial pilot sustained minor injuries. The airplane was registered to and operated by the Rhinebeck Aerodrome Museum under the provisions of 14 Code of Federal Regulations Part 91 as an air show flight. Visual meteorological conditions prevailed and no flight plan was filed. The local flight originated at NY94 about 1500.

The pilot reported the following. He was participating in an air show demonstration, called a "bombing routine." Fuel was added to the fuel tank prior to engine start, and the flight departed with about 12 gallons on board. Aircraft preflight and ground operations were normal. During one of the bombing runs, about 350 feet above the ground, he dropped his bomb and added throttle to pull up and away for the next pass. He heard a "pop" and the engine rpm decreased. He unsuccessfully attempted to recover the engine with throttle movements. He attempted a restart, confirmed the fuel valve positions, and checked the magnetos. Unable to restart the engine, he attempted a forced landing. The airplane clipped trees and came to rest, inverted, at the edge of a stand of trees at the south end of the runway.

An inspector with the Federal Aviation Administration responded to the accident site and examined the wreckage. There were approximately five gallons of fuel remaining in the fuel tank. Both upper and lower wings received structural damage. An examination of the engine revealed normal spark plug color and wear and the exhaust was clean. Internal engine continuity was confirmed. The wreckage was recovered to the museum hangar where a detailed examination of the fuel system was performed.

After recovery of the wreckage, the engine-driven fuel pump was removed from the engine and examined. The pump was disassembled and found in an "operational condition internally." No reason for the loss of engine power was found.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	45, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	June 2, 2011
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 20, 2009
Flight Time:	4650 hours (Total, all aircraft), 14 hours (Total, this make and model), 4450 hours (Pilot In Command, all aircraft), 140 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Nord	Registration:	N51SV
Model/Series:	STAMPE SV4C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	460
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	April 10, 2011 Condition	Certified Max Gross Wt.:	1716 lbs
Time Since Last Inspection:	12 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	834 Hrs as of last inspection	Engine Manufacturer:	RENAULT
ELT:	Not installed	Engine Model/Series:	H.P03
Registered Owner:	Rhinebeck Aerodrome Museum	Rated Power:	145 Horsepower
Operator:	Rhinebeck Aerodrome Museum	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	POU,165 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.97 inches Hg	Temperature/Dew Point:	31°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Rhinebeck, NY (NY94)	Type of Flight Plan Filed:	None
Destination:	Rhinebeck, NY (NY94)	Type of Clearance:	None
Departure Time:	15:00 Local	Type of Airspace:	

Airport Information

Airport:	Old Rhinebeck Airport NY94	Runway Surface Type:	Dirt
Airport Elevation:	323 ft msl	Runway Surface Condition:	Dry
Runway Used:	36	IFR Approach:	None
Runway Length/Width:	2200 ft / 75 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	41.971389,-73.862777(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Charles Emering; FAA/FSDO; Teterboro, NJ
Original Publish Date:	February 6, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=81337

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