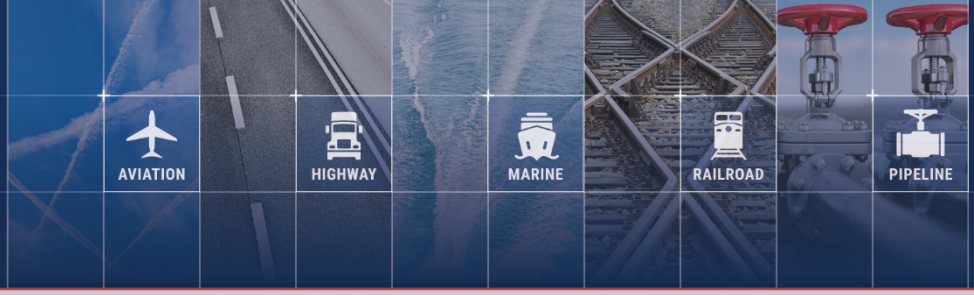

Aviation Investigation Final Report

Location:	Cowlesville, New York	**Accident Number:**	ERA09CA351
Date & Time:	June 15, 2009, 15:50 Local	**Registration:**	N3LD
Aircraft:	DREYER STARDUSTER	**Aircraft Damage:**	Substantial
Defining Event:	Fuel exhaustion	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

According to the pilot-owner of the amateur-built, tandem-seat airplane, prior to departure the partially filled main fuel tank contained an estimated 11 gallons of fuel. The pilot-owner based the quantity on the fuel gauge reading and his 9 years' experience with the airplane, but did not "stick" the tank. Another pilot, seated in the front seat, stated that the pilot-owner also observed "some" fuel in the auxiliary fuel tank, as "indicated by the float." After taking off and climbing the airplane to 3,000 feet, the pilot-owner demonstrated some maneuvers, which the front seat pilot then performed. None of the maneuvers were aerobatic, as fuel would have spilled from the non-sealed auxiliary tank. After maneuvering, the pilot-owner advanced the throttle to return to the airport, but the engine remained at what he thought was "low power" with "engine sound continuous - perhaps just above idle." The pilot-owner established a glide, activated the fuel boost pump, moved the fuel selector to the auxiliary tank, checked both magnetos, and tried various throttle settings before advancing the throttle to full and returning the fuel selector to the main tank. The pilot-owner subsequently performed a forced landing to a corn field, and upon touchdown, the landing gear sheared and the airplane nosed over. The following day, a Federal Aviation Administration examination of the airplane revealed damage to the left wing spar and rudder, and no fuel present in the fuel tanks, fuel lines or gascolator. An unknown quantity of fuel had leaked out of the auxiliary fuel tank. The pilot-owner subsequently noted, "it has become obvious that the engine quit for a lack of fuel," and that he felt the reason the auxiliary fuel did not "re-start" the engine was due to vapor lock. He further stated, "the major error I committed, was trusting the…fuel quantity indicated and not refueling the aircraft prior to this flight."

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 due to fuel exhaustion as a result of the pilot's inadequate preflight fuel inspection.

Findings

Personnel issues	Fuel planning - Pilot
Aircraft	Fuel - Fluid level

Factual Information

History of Flight

Maneuvering	Fuel exhaustion (Defining event)
Maneuvering	Loss of engine power (total)

Pilot Information

Certificate:	Airline transport; Flight engineer	**Age:**	72,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Rear
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	March 5, 2009
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	April 14, 2009
Flight Time:	35700 hours (Total, all aircraft), 327 hours (Total, this make and model), 28900 hours (Pilot In Command, all aircraft)		

Co-pilot Information

Certificate:	Private	**Age:**	62,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:		**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	DREYER	**Registration:**	N3LD
Model/Series:	STARDUSTER Too SA-300	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	1145
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	July 15, 2008 Condition	**Certified Max Gross Wt.:**	2140 lbs
Time Since Last Inspection:	11 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	630 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO-540 C4BA
Registered Owner:	PROMISE RECORDING INC	**Rated Power:**	260 Horsepower
Operator:	PROMISE RECORDING INC	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BUF,728 ft msl	**Distance from Accident Site:**	9 Nautical Miles
Observation Time:	19:54 Local	**Direction from Accident Site:**	160°
Lowest Cloud Condition:	Scattered / 6500 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	22°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lancaster, NY (BQR)	**Type of Flight Plan Filed:**	None
Destination:	Lancaster, NY (BQR)	**Type of Clearance:**	VFR flight following
Departure Time:	15:32 Local	**Type of Airspace:**	

Airport Information

Airport:	Buffalo Niagara International BUF	**Runway Surface Type:**	
Airport Elevation:	728 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	42.77639,-78.549163(est)

Administrative Information

Investigator In Charge (IIC):	Cox, Paul
Additional Participating Persons:	Thomas W Williams; FAA/FSDO; Rochester, NY
Original Publish Date:	September 10, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=74060