



# Aviation Investigation Final Report

<b>Location:</b>	Rhinebeck, New York	<b>Accident Number:</b>	NYC04LA192
<b>Date &amp; Time:</b>	August 14, 2004, 15:40 Local	<b>Registration:</b>	N11478
<b>Aircraft:</b>	Waco QCF	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

During the initial climb after takeoff, the airplane experienced a partial loss of engine power, and the pilot elected to perform a forced landing to the grass at the runway overrun. During the landing, the airplane's lower left wing, propeller and left wing were damaged. The pilot reported that the airplane was fueled, and then flew normally for about 25 minutes earlier on the day of the accident. On scene examination of the engine, which included an inspection of intake, exhaust, and fuel system, did not reveal any pre-impact malfunctions. A subsequent teardown of the engine did not reveal any catastrophic failures; however, a mechanic reported that bench testing of the magnetos revealed that they both contained open secondary windings. During an interview, the mechanic further stated that the problem with the magnetos was not apparent until they were heated to a temperature of about 130 degrees.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A partial loss of engine power due to a magneto failure.

### Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF  
Phase of Operation: TAKEOFF - INITIAL CLIMB

#### Findings

1. (C) IGNITION SYSTEM,MAGNETO - FAILURE

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Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: DESCENT - EMERGENCY

Findings

2. TERRAIN CONDITION - GROUND

## Factual Information

On August 14, 2004, about 1540 eastern daylight time, a Waco QCF, N11478, was substantially damaged during a forced landing, when it experienced a partial loss of engine power during the initial climb after takeoff from Old Rhinebeck Airport, Rhinebeck, New York. The certificated commercial pilot was not injured. Visual meteorological conditions prevailed and no flight plan had been filed for the personal flight conducted under 14 CFR Part 91.

The airplane was departing to the south, on a 2,200-foot-long, 75-foot-wide, turf runway.

The pilot reported that the airplane lifted off the runway normally; however, after it had over flown about 3/4 of the runway, the airplane experienced a "dramatic" loss of engine power. The pilot elected to retard the throttle, and perform a forced landing to the grass at the runway overrun. During the landing, the airplane's lower left wing, propeller and left wing were damaged.

The pilot reported that the airplane was fueled, and then flew normally for about 25 minutes earlier on the day of the accident.

On scene examination of the engine by a Federal Aviation Administration Inspector did not reveal any pre-impact malfunctions. The examination included an inspection of the intake, exhaust, and fuel system. A subsequent teardown of the engine did not reveal any catastrophic failures; however, a mechanic reported that bench testing of the magnetos revealed that they both contained open secondary windings. During an interview, the mechanic further stated that the problem with the magnetos was not apparent until they were heated to a temperature of about 130 degrees.

The airplane was equipped with a Continental W670 engine. According to maintenance records, the engine was overhauled on December 29, 1997. The engine had been operated for about 100 hours at the time of the accident.

The pilot reported that the airplane had been operated for about 18 hours since it's most recent annual inspection, which was performed on December 16, 2003.

A weather observation taken at an airport located about 24 miles south of the accident site, at 1553, included a temperature and dew point of 79 and 63 degrees F, respectively. Review of a carburetor icing probability chart placed the reported temperature and dew point in the "serious icing at glide power" range of the chart.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	45, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	February 17, 2004
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	November 22, 2003
<b>Flight Time:</b>	631 hours (Total, all aircraft), 103 hours (Total, this make and model), 512 hours (Pilot In Command, all aircraft), 19 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Waco	<b>Registration:</b>	N11478
<b>Model/Series:</b>	QCF	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	3559
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	December 1, 2003 Annual	<b>Certified Max Gross Wt.:</b>	2300 lbs
<b>Time Since Last Inspection:</b>	18 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3149 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	W670
<b>Registered Owner:</b>	Daniel J. Taylor	<b>Rated Power:</b>	220 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	POU,165 ft msl	<b>Distance from Accident Site:</b>	24 Nautical Miles
<b>Observation Time:</b>	15:53 Local	<b>Direction from Accident Site:</b>	180°
<b>Lowest Cloud Condition:</b>	Scattered / 7000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	270°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.15 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 17°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Rhinebeck, NY (NY94)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:40 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Old Rhinebeck NY94	<b>Runway Surface Type:</b>	Dirt;Grass/turf
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	S	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2200 ft / 75 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	41.971389,-73.862777

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Schiada, Luke
<b>Additional Participating Persons:</b>	Ken Symons; Teterboro FSDO; Saddle Brook, NJ
<b>Original Publish Date:</b>	September 13, 2005
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=59910">https://data.nts.gov/Docket?ProjectID=59910</a>

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