



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Fowlerville, Michigan	<b>Accident Number:</b>	CEN11LA014
<b>Date &amp; Time:</b>	October 11, 2010, 15:16 Local	<b>Registration:</b>	N53DB
<b>Aircraft:</b>	Drake Ronald A Acro Sport 1	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

A witness reported that during landing the airplane touched down hard and bounced. He heard the sound of the engine increase, but not to a level consistent with takeoff power. He noted that the nose of the airplane was high. The airplane appeared to become unsteady and turned to the left, low over the trees. He commented that the airplane was rolling as he lost sight of it. He then heard the sound of the crash. A postaccident examination of the airframe and engine did not reveal any anomalies consistent with a preimpact failure or malfunction. The pilot had logged 3 flights in the amateur-built airplane prior to the accident flight, with a total of 3 landings.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's loss of control during a go-around maneuver following a bounced landing. Contributing to the accident was the pilot's limited experience in the make and model airplane.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Personnel issues</b>	Total experience w/ equipment - Pilot

# Factual Information

## History of Flight

Approach-VFR go-around	Loss of control in flight (Defining event)
Approach-VFR go-around	Collision with terr/obj (non-CFIT)

On October 11, 2010, about 1516 eastern daylight time, an amateur-built Drake Acro Sport 1 biplane, N53DB, impacted trees and terrain at the Maple Grove Airport (65G), Fowlerville, Michigan. The pilot had been conducting takeoffs and landings on runway 27 (3,050 feet by 110 feet, turf) and was attempting a go-around at the time of the accident. The pilot was seriously injured. The airplane sustained substantial damage to the wings and fuselage. The aircraft was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed for the flight, which was not operated on a flight plan. The local flight departed from 65G at an undetermined time.

A witness reported that the pilot had overshot the runway and executed a go-around prior to the accident. On the accident approach, the airplane touched down hard and bounced. He heard the sound of the engine increase, but not to a level consistent with takeoff power. He noted that the nose of the airplane was high. The airplane began to "waffle" and turn to the left, low over the trees. He commented that the airplane was rolling as he lost sight of it. He then heard the sound of the crash.

The pilot did not have any recollection of the events leading up to the accident.

The airplane impacted a wooded area south of the airport. Sections of the wings were separated from the fuselage. They were located adjacent to the fuselage. The ailerons were dislocated from the wings and were located with the wreckage. The aft fuselage was deformed. The elevators and rudders remained attached to the horizontal and vertical stabilizers, respectively. Control continuity was confirmed from the elevators and rudder to the cockpit controls. A postaccident examination of the airframe did not reveal any anomalies consistent with a preimpact failure. A detailed examination of the engine did not reveal any anomalies which would have precluded the production of full power. The airplane recording hour meter indicated 10.7 hours.

The accident airplane was issued an amateur-built, experimental airworthiness certificate on April 9, 2010. Maintenance records included an entry noting the issuance of the airworthiness certificate. One additional entry, dated April 23, 2010, indicated the successful completion of the transponder and altitude reporting equipment testing. There were no subsequent entries in the maintenance records provided.

A review of pilot's logbook indicated a total flight time of 695.5 hours, with 20.6 hours in

tailwheel equipped aircraft. The available logbook information included 3 entries related to the accident airplane. The first was dated June 4, 2010, and noted a local flight of 0.7 hours, with 1 landing. The entry also included the comment, "Prop strike on landing." The second entry was dated October 1, 2010, and indicated a flight duration of 1.6 hours, with 1 landing. This entry included the notation, "First successful flight by R. D." The third entry was dated October 6, 2010, and indicated a flight duration of 1.1 hours, with 1 landing. This was the final entry in the available records. A logbook endorsement indicated the satisfactory completion of a flight review on May 25, 2010.

Weather conditions recorded at the Livingston County Airport (OZW), located about 7 miles southeast of 65G, at 1515, included clear skies and northwest winds at 6 knots.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	63, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Front
<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>	Sport pilot None	<b>Last FAA Medical Exam:</b>	June 1, 2006
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 25, 2010
<b>Flight Time:</b>	696 hours (Total, all aircraft), 4 hours (Total, this make and model), 6 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Drake Ronald A	<b>Registration:</b>	N53DB
<b>Model/Series:</b>	Acro Sport 1	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	90401
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	April 9, 2010 Condition	<b>Certified Max Gross Wt.:</b>	1350 lbs
<b>Time Since Last Inspection:</b>	10 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	11 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-320-H2AD
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>	On file	<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>	OZW,962 ft msl	<b>Distance from Accident Site:</b>	6 Nautical Miles
<b>Observation Time:</b>	15:35 Local	<b>Direction from Accident Site:</b>	146°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	350°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.79 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Fowlerville, MI (65G )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Fowlerville, MI (65G )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Maple Grove 65G	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	908 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	27	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3050 ft / 110 ft	<b>VFR Approach/Landing:</b>	Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<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 Serious	<b>Latitude, Longitude:</b>	42.717224,-84.0625(est)

## Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Lewis Wright; FAA-Detroit FSDO; Belleville, MI
Original Publish Date:	June 8, 2011
Last Revision Date:	
Investigation Class:	<a href="#">Class</a>
Note:	
Investigation Docket:	<a href="https://data.nts.gov/Docket?ProjectID=77544">https://data.nts.gov/Docket?ProjectID=77544</a>

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