



# Aviation Investigation Final Report

<b>Location:</b>	Bristow, Virginia	<b>Accident Number:</b>	GAA17CA055
<b>Date &amp; Time:</b>	October 30, 2016, 20:15 Local	<b>Registration:</b>	N781MA
<b>Aircraft:</b>	DIAMOND AIRCRAFT IND INC DA 20	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Abnormal runway contact	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

According to the pilot, after multiple previous landings that night to runway 34L, the airplane was thrown "off course" after it encountered a crosswind. The pilot pulled the power off briefly during the landing, and the airplane touched down. However, he reported that he made a late decision to go around and reapplied the power to establish a climb. He added that the airplane was "off course" at a low airspeed and that he applied full power, but he panicked and reduced his right rudder application, and the airplane veered to the left. The airplane stalled and impacted the ground, the nose landing gear became embedded in the mud, and the airplane nosed over and came to rest inverted. The airplane sustained substantial damage to the left wing root and empennage.

According to the airport security camera video, the airplane descended over runway 34L and made an immediate sharp left 270° turn to the left of the runway heading and rapidly ascended. After the sharp left turn, the airplane was airborne for about 534 ft before impacting the ground and nosing over.

White paint transfer markings observed on the runway surface and damage to the airplane's left wing indicated that the airplane had impacted the runway surface during the accident sequence.

About 25 minutes before the accident, the published METAR for the accident airport reported that the wind was from 320° at 6 knots. There were no reported wind gusts at the time of the accident, and there were no published wind gusts at the airport for the remainder of the day.

The pilot reported that he had 99 hours of total flight time, 78 hours of which were in the accident airplane make and model, and 4 hours of which were within the 90 days before the accident.

The pilot reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

## Probable Cause and Findings

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

The pilot's loss of directional control during a landing attempt at night, which resulted in a delayed go-around procedure and subsequent impact with terrain. Contributing to the accident was the pilot's lack of recent flight experience.

### Findings

<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Environmental issues</b>	Dark - Effect on personnel
<b>Personnel issues</b>	Delayed action - Pilot
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Personnel issues</b>	Recent experience - Pilot

## Factual Information

### History of Flight

<b>Landing</b>	Attempted remediation/recovery
<b>Landing</b>	Aerodynamic stall/spin
<b>Landing</b>	Abnormal runway contact (Defining event)
<b>Landing-aborted after touchdown</b>	Loss of control on ground
<b>Landing-aborted after touchdown</b>	Runway excursion
<b>Landing-aborted after touchdown</b>	Collision with terr/obj (non-CFIT)

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	35, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	4-point
<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 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	February 2, 2015
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	November 9, 2015
<b>Flight Time:</b>	(Estimated) 99 hours (Total, all aircraft), 78 hours (Total, this make and model), 57 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	DIAMOND AIRCRAFT IND INC	<b>Registration:</b>	N781MA
<b>Model/Series:</b>	DA 20 C1	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2004	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Utility	<b>Serial Number:</b>	C0281
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	June 2, 2016 Annual	<b>Certified Max Gross Wt.:</b>	1764 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3318.5 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-240-B
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	125 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>	KHEF, 192 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	23:50 Local	<b>Direction from Accident Site:</b>	180°
<b>Lowest Cloud Condition:</b>	Scattered / 8000 ft AGL	<b>Visibility:</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 11000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	320°	<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	29.94 inches Hg	<b>Temperature/Dew Point:</b>	21°C / 15°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	CHARLOTTESVILLE, VA (CHO)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Bristow, VA (HEF)	<b>Type of Clearance:</b>	VFR flight following
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	MANASSAS RGNL/HARRY P DAVIS FI HEF	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	192 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	34L	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3715 ft / 100 ft	<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<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 Minor	<b>Latitude, Longitude:</b>	38.721111,-77.514999(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hicks, Michael
<b>Additional Participating Persons:</b>	Peter Popsuy; FAA; Herndon, VA
<b>Original Publish Date:</b>	July 5, 2017
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=93688">https://data.nts.gov/Docket?ProjectID=93688</a>

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