



# Aviation Investigation Final Report

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<b>Location:</b>	Richmond, Virginia	<b>Accident Number:</b>	NYC04LA219
<b>Date &amp; Time:</b>	September 24, 2004, 18:20 Local	<b>Registration:</b>	N665WB
<b>Aircraft:</b>	de Havilland DHC-22A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

After an uneventful departure from the airport, as the airplane was turned to enter the traffic pattern, the engine lost power. The pilot elected to conduct a 180-degree left turn to return to the airport, and during the turn, he overshot the runway. He then turned the airplane to the right to realign with the runway, and at 50 feet above the ground, the right wing stalled. The airplane continued to roll to the right and would not respond to aileron inputs. The airplane impacted a grass area next to the runway; ground looped, and came to rest. Examination of the wreckage revealed that when fuel was drained from the carburetor bowl, the fuel was consistent with automotive fuel, and was contaminated with water and other foreign object debris. A witness stated that the pilot had experienced a similar problem with a sputtering engine on the day prior to the accident, and executed an uneventful forced landing to the airport.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate preflight inspection which resulted in fuel contamination and a subsequent loss of engine power. A factor in the accident was the pilot's failure to maintain airspeed while attempting a forced landing which resulted in an inadvertent stall followed by the airplane impacting a grassy area next to the runway.

## Findings

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Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. FLUID,FUEL - CONTAMINATION
  2. (C) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND
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Occurrence #2: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: DESCENT - EMERGENCY

### Findings

3. (F) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
  4. STALL - INADVERTENT - PILOT IN COMMAND
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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

5. TERRAIN CONDITION - GRASS

## Factual Information

On September 24, 2004, at 1820 eastern daylight time, a deHavilland DHC-22A, N665WB, was substantially damaged during a forced landing, after experiencing a total loss of engine power after takeoff from the Chesterfield County Airport (FCI), Richmond, Virginia. The certificated private pilot was seriously injured. Visual meteorological conditions prevailed, and no flight plan was filed for the local flight conducted under 14 CFR Part 91.

According to the pilot, the intention of the flight was to conduct practice takeoffs and landings. The engine started normally, and all preflight checks were normal. The departure from the airport was normal, and as the airplane was turned to enter the traffic pattern, at 650 feet above the ground, the engine lost power. The pilot elected to conduct a 180-degree left turn to return to the airport, and during the turn, he overshot the runway. He then turned the airplane to the right to realign with the runway, and at 50 feet above the ground, the right wing stalled. The airplane continued to roll to the right and would not respond to aileron inputs. The airplane impacted a grass area next to the runway; ground looped, and came to rest.

According to several witnesses, the airplane had departed from runway 15, and as it was climbing out, the engine began to "sputter." The witnesses then observed the airplane turn to the left, and continue the turn back towards the airport. As the airplane neared the airport, the engine quit, and the airplane descended to the ground.

One of the witnesses added that the pilot had experienced a similar problem with a sputtering engine on the day prior to the accident, and executed an uneventful forced landing to the airport.

A Federal Aviation Administration (FAA) inspector examined the wreckage after the accident. Fuel was drained from the carburetor bowl, the fuel was consistent with automotive fuel, and contaminated with water and other foreign object debris.

The pilot stated to the FAA inspector that he transported automotive gasoline in 5-gallon containers to the airport to fuel the airplane.

The airplane was approved for use with automotive fuel.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	54, 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>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	November 1, 2002
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	September 1, 2002
<b>Flight Time:</b>	1454 hours (Total, all aircraft), 375 hours (Total, this make and model), 1393 hours (Pilot In Command, all aircraft), 6 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	de Havilland	<b>Registration:</b>	N665WB
<b>Model/Series:</b>	DHC-22A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	C1-0113
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	March 1, 2004 Annual	<b>Certified Max Gross Wt.:</b>	2100 lbs
<b>Time Since Last Inspection:</b>	12 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4435 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Gipsy Major
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	MK 10
<b>Registered Owner:</b>	Robert L. Tomlinson	<b>Rated Power:</b>	150 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>	RIC,250 ft msl	<b>Distance from Accident Site:</b>	12 Nautical Miles
<b>Observation Time:</b>	17:54 Local	<b>Direction from Accident Site:</b>	60°
<b>Lowest Cloud Condition:</b>	Few / 4600 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Overcast / 25000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	90°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.18 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 14°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Richmond, VA (FCI )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	19:00 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Chesterfield County Airport FCI	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	237 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	33	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5500 ft / 100 ft	<b>VFR Approach/Landing:</b>	Forced landing

## 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>	37.406387,-77.524719

## Administrative Information

**Investigator In Charge (IIC):** Demko, Stephen  
**Additional Participating Persons:** John Dostal; FAA; Richmond, VA

**Original Publish Date:** April 25, 2006

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=60215>

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