



# Aviation Investigation Final Report

<b>Location:</b>	WARRENTON, Virginia	<b>Accident Number:</b>	BF091LA075
<b>Date &amp; Time:</b>	July 27, 1991, 16:30 Local	<b>Registration:</b>	N43494
<b>Aircraft:</b>	TAYLORCRAFT BC-12D	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

BEFORE THE FLIGHT, THE AIRCRAFT WAS REFUELED. THE PILOT COMPLETED HIS PREFLIGHT WHICH INCLUDED DRAINING THE SUMPS. HE DID NOT NOTICE ANY WATER IN THE FUEL. HE STATED THAT SHORTLY AFTER TAKEOFF AND REACHING AN ALTITUDE OF 500 FEET AGL, THE ENGINE LOST POWER. HE SAID HE TRIED TO RESTART THE ENGINE BUT WAS UNSUCCESSFUL. HE TRIED TO REVERSE DIRECTION AND LAND ON THE RUNWAY BUT HE WAS ONLY ABLE TO LAND ON THE GRASSY AREA. THE AIRCRAFT COLLIDED WITH SOME STANDING WATER AND NOSED OVER. FAA EXAMINATION OF THE AIRCRAFT REVEALED WATER CONTAMINATION IN THE FUEL TANKS.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S INADEQUATE PREFLIGHT OPERATIONS, WHICH FAILED TO DETECT THE PRESENCE OF WATER CONTAMINATION IN THE FUEL SYSTEM, AND RESULTED IN THE LOSS OF POWER AND SUBSEQUENT FORCED LANDING. OTHER RELATED FACTOR: STANDING WATER ON THE GRASSY AREA.

## Findings

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

Findings

1. (C) FLUID,FUEL - CONTAMINATION
2. (C) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND

-----

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

-----

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: LANDING - ROLL

Findings

3. (F) TERRAIN CONDITION - BERM

-----

Occurrence #4: NOSE OVER  
Phase of Operation: LANDING - ROLL

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	33, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<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--no waivers/lim.	<b>Last FAA Medical Exam:</b>	January 31, 1991
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1158 hours (Total, all aircraft), 99 hours (Total, this make and model), 1079 hours (Pilot In Command, all aircraft), 110 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	TAYLORCRAFT	<b>Registration:</b>	N43494
<b>Model/Series:</b>	BC-12D BC-12D	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	116
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	0
<b>Date/Type of Last Inspection:</b>	November 19, 1991 Annual	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>	128 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	127 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-320-A2B
<b>Registered Owner:</b>	KIRK WICKER	<b>Rated Power:</b>	150 Horsepower
<b>Operator:</b>	KIRK WICKER	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	Broken	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	130°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 17°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	00:00 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	WARRENTON-FAUQUIA W66	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	329 ft msl	<b>Runway Surface Condition:</b>	Wet
<b>Runway Used:</b>	6	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2087 ft / 40 ft	<b>VFR Approach/Landing:</b>	Forced landing

## 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>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Johnson, Beverly
<b>Additional Participating Persons:</b>	JOHN BROWN; WASHINGTON , DC
<b>Original Publish Date:</b>	December 4, 1992
<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=11699">https://data.nts.gov/Docket?ProjectID=11699</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).