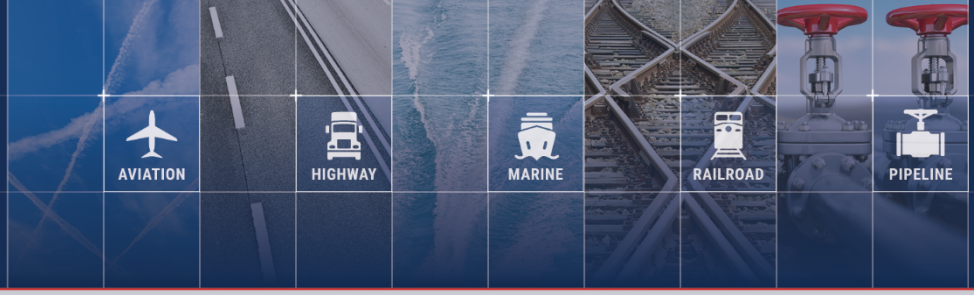

Aviation Investigation Final Report

Location:	CONCORD, North Carolina	**Accident Number:**	ATL94LA057
Date & Time:	March 5, 1994, 09:35 Local	**Registration:**	N738CK
Aircraft:	CESSNA 182RG	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PRIVATE PILOT AND HIS PASSENGER WERE TAKING OFF FROM A 2,700 FOOT LONG GRASS AIRSTRIP. HE REPORTED THAT THE RUNWAY WAS WET FROM A RECENT RAIN. HIS USUAL PRACTICE WHEN TAKING OFF TO THE SOUTH IS TO PERFORM A RUNUP IN FRONT OF THE HANGAR, WHICH IS LOCATED ADJACENT TO THE NORTH END OF THE RUNWAY, THEN MAKE A ROLLING TAKEOFF FROM THAT POSITION. DURING THE TAKEOFF ROLL, HE FELT THAT THE AIRCRAFT ACCELERATED SLUGGISHLY, AND ABORTED THE TAKEOFF AFTER THE AIRCRAFT DID NOT REACH EXPECTED AIRSPEEDS. UNABLE TO STOP THE AIRCRAFT DUE TO THE WET GRASS, HE GROUND LOOPED THE AIRCRAFT. HE REPORTED TO AN FAA INSPECTOR THAT HE DID NOT CONSIDER THE EFFECTS OF THE WET RUNWAY ON AIRCRAFT PERFORMANCE. THE AIRCRAFT ENGINE WAS TEST-RUN FOLLOWING THE ACCIDENT WITH SATISFACTORY RESULTS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S INADEQUATE PREFLIGHT PLANNING AND PREPARATION, IN THAT HE DID NOT CONSIDER THE EFFECTS OF A WET, GRASS RUNWAY ON AIRCRAFT PERFORMANCE. FACTORS WERE THE WET, GRASS CONDITIONS OF THE RUNWAY SURFACE.

Findings

Occurrence #1: OVERRUN
Phase of Operation: TAKEOFF - ABORTED

Findings
1. (F) AIRPORT FACILITIES,RUNWAY/LANDING AREA CONDITION - GRASS
2. (F) AIRPORT FACILITIES,RUNWAY/LANDING AREA CONDITION - WET
3. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ABORTED

Factual Information

On March 5, 1994, at 0935 eastern standard time, a Cessna 182RG, N738CK, collided with terrain during an aborted takeoff near Concord, North Carolina. The aircraft was substantially damaged. The private pilot and one passenger were not injured. The aircraft was operated under 14 CFR Part 91 by the pilot. Visual meteorological conditions existed at the time, and no flight plan was filed for the personal flight to Erwin, North Carolina. The flight was originating at the time of the accident.

The pilot reported the following: All preflight operations were normal, and the aircraft was loaded with about 450 pounds of occupants and baggage, plus about 70 gallons of fuel. An engine runup was performed in front of the hangar on the north side of the airstrip, and all engine indications were normal. His normal procedure when departing to the south is to initiate a rolling takeoff from the hangar area, instead of from a dead stop at the north end of the runway. He recalled that the winds were calm, the temperature was cool, and the runway was "damp" from recent rain. During the takeoff roll, he felt a "sluggishness" in acceleration, but a scan of the engine instruments indicated normal readings. He passed a point where he checks his airspeed, and noticed a reading of 40 knots, where he expected 60 knots. During the next 500 to 600 feet of takeoff roll, the aircraft accelerated about 10 knots, and he elected to abort the takeoff. He closed the throttle, pushed forward on the yoke, and applied the brakes. Despite pumping the brakes, the field was too wet to provide adequate friction for stopping. In an effort to avoid a deep creek located past the departure end of the runway, he attempted to ground loop the aircraft. The aircraft turned 90 degrees to the west and came to rest on the west side of the runway.

An inspector from the Federal Aviation Administration visited the accident site and inspected the aircraft. She reported that the pilot did not have a current biennial flight review, however he had been flying with an instructor within the previous 8 months in preparation for an instrument rating. She discussed takeoff techniques with the accident pilot, and the pilot reported that he did not consider the effects of a wet runway on an aborted takeoff, or on normal takeoff performance.

The propeller from the aircraft was removed and repaired so that a test run of the engine could be performed. Once the propeller was reinstalled, the nose gear was secured so that the engine could be tested. The engine started immediately, and idled smoothly. The engine rpm was increased to 2,000, and a magneto check was performed, with satisfactory results. The engine speed was then increased to the red line limit. The engine again ran smoothly, with no hesitation or roughness. Oil pressure indications were within normal limits at all power settings. Engine compression was satisfactory on all cylinders. The mechanic who performed the inspection did note that there were no baffles installed in the muffler. The engine examination was then concluded.

Pilot Information

Certificate:	Private	**Age:**	39,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	November 13, 1992
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	346 hours (Total, all aircraft), 226 hours (Total, this make and model), 294 hours (Pilot In Command, all aircraft), 23 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N738CK
Model/Series:	182RG 182RG	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	R18200911
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	April 28, 1993 Annual	**Certified Max Gross Wt.:**	3100 lbs
Time Since Last Inspection:	94 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1837 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	O-540-J3C5D
Registered Owner:	PHILLIPS, E. ROLLAND	**Rated Power:**	235 Horsepower
Operator:	PHILLIPS, E. ROLLAND	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	CLT ,749 ft msl	**Distance from Accident Site:**	23 Nautical Miles
Observation Time:	10:50 Local	**Direction from Accident Site:**	240°
Lowest Cloud Condition:	Clear	**Visibility**	30 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	250°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		**Type of Flight Plan Filed:**	None
Destination:	ERWIN , NC (37W)	**Type of Clearance:**	None
Departure Time:	09:35 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	CHALFANT NC77	**Runway Surface Type:**	Grass/turf
Airport Elevation:	587 ft msl	**Runway Surface Condition:**	Wet
Runway Used:	18	**IFR Approach:**	None
Runway Length/Width:	2700 ft / 60 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	35.399963,-80.590225(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	NINA A MCBRIDE; CHARLOTTE , NC ROBERT J SCHILLING; CHARLOTTE , NC
Original Publish Date:	November 14, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=3352