



Aviation Investigation Final Report

Location:	MARTIN, South Dakota	Accident Number:	DEN90LA125
Date & Time:	June 4, 1990, 17:20 Local	Registration:	N78516
Aircraft:	CESSNA 188A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

THE PILOT WAS ATTEMPTING TO TAKE OFF FROM A WET, MUDDY, 2600-FT LONG SOD RUNWAY (ELEVATION 3300 FEET MSL) WITH FULL FUEL AND 70 GALLONS OF 2-4-D. THE AIRPLANE WAS COMPUTED TO BE BELOW ITS MAXIMUM CERTIFICATED GROSS WEIGHT. THE PILOT SELECTED 5 DEGREE FLAPS. OPTIMUM TAKEOFF PERFORMANCE IS ACHIEVED USING 20 DEGREE FLAPS. TEMPERATURE WAS APPROXIMATELY 88 DEGREE AND THE WIND WAS REPORTED TO BE FROM THE WEST-NORTHWEST AT 2-3 MPH. PERFORMANCE FIGURES INDICATE THE AIRPLANE SHOULD HAVE BEEN ABLE TO TAKEOFF. THE PILOT TOLD AN FAA INSPECTOR THE AIRPLANE LIFTED OFF MOMENTARILY THEN SETTLED BACK TO THE RUNWAY. THE PILOT'S ACCIDENT REPORT SAID THE AIRPLANE DID NOT BECOME AIRBORNE AND THIS DISCREPANCY COULD NOT BE RESOLVED. THE PILOT SAID THE AIRPLANE WENT OFF THE LEFT SIDE OF THE RUNWAY, WENT THROUGH A SMALL POND, STRUCK THE SHOULDER OF A ROAD, SLID ACROSS THE ROAD, AND CAME TO REST ON ITS NOSE IN A LARGE POND.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE ON-GROUND LOSS OF CONTROL DURING THE TAKEOFF GROUND RUN. CONTRIBUTING TO THIS ACCIDENT WAS THE PILOT'S FAILURE TO USE OPTIMUM TAKEOFF FLAPS FOR THE RUNWAY CONDITIONS THAT EXISTED, AND THE SOFT WET RUNWAY SURFACE.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (F) TERRAIN CONDITION - SOFT
2. (F) TERRAIN CONDITION - WET
3. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
4. (F) LOWERING OF FLAPS - INADEQUATE - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

5. TERRAIN CONDITION - WATER
6. TERRAIN CONDITION - ROADWAY/HIGHWAY

Factual Information

Pilot Information

Certificate:	Commercial	Age:	61, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	May 3, 1990
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	25000 hours (Total, all aircraft), 3500 hours (Total, this make and model), 25000 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N78516
Model/Series:	188A 188A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	18801953T
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	April 10, 1990 Annual	Certified Max Gross Wt.:	3300 lbs
Time Since Last Inspection:	80 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1390 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Installed	Engine Model/Series:	IO-520-D23
Registered Owner:	PAUL R. NELSON	Rated Power:	300 Horsepower
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:	LAKOTA NATION AVIATION, INC.	Operator Designator Code:	LKTG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	25 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	2 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	315°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	31°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MARTIN , SD (NONE)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	17:20 Local	Type of Airspace:	Class G

Airport Information

Airport:	OLD MARTIN NUMICIPAL 9V6	Runway Surface Type:	Grass/turf
Airport Elevation:	3100 ft msl	Runway Surface Condition:	Wet
Runway Used:	24	IFR Approach:	None
Runway Length/Width:	2400 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	43.169727,-101.720405(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	MARTIN GOODWIN; RAPID CITY , SD
Original Publish Date:	September 15, 1992
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=17942

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