



Aviation Investigation Final Report

Location:	SPARTANBURG, South Carolina	Accident Number:	MIA98LA167
Date & Time:	May 21, 1998, 22:00 Local	Registration:	N944RJ
Aircraft:	North American T-28B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The pilot was contracted to transport tissue from Spartanburg, to Charleston, South Carolina. Before departure on the positioning flight, he was advised by Flight Service Station of a severe thunderstorm watch covering South Carolina; and a thunderstorm was east of Greer, moving east and deteriorating. While taxiing to takeoff, he was advised the thunderstorm appeared to be over the destination airport and Greer Approach Control advised him that the thunderstorm was over the destination airport. The flight continued and during the approach, rain increased in intensity as reported by the pilot and a line service employee on the airport. The pilot stated that he landed about one-quarter of the way down the 5,203-foot-long runway but did not apply the brakes until the 1/2 way point. The airplane rolled off the departure end of the runway, down an embankment, and came to rest against a guardrail. Postcrash examination of the brakes revealed no evidence of preimpact failure or malfunction. The pilot was the sole pilot of an on-demand air taxi operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's misjudgment of speed and distance, and his delay in the use of brakes. Contributing to the accident was a thunderstorm, a wet runway, the pilot's self-induced pressure, and his inadequate inflight planning/decision.

Findings

Occurrence #1: OVERRUN

Phase of Operation: LANDING - ROLL

Findings

1. (F) WEATHER CONDITION - THUNDERSTORM
 2. (C) DISTANCE/SPEED - MISJUDGED - PILOT IN COMMAND
 3. (F) PRESSURE INDUCED BY CONDITIONS/EVENTS - PILOT IN COMMAND
 4. (C) IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND
 5. AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - WET
 6. (C) BRAKES(NORMAL) - DELAYED - PILOT IN COMMAND
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Occurrence #2: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - ROLL

Findings

7. OBJECT - FENCE

Factual Information

On May 21, 1998, about 2200 eastern daylight time, a North American T-28B, N944RJ, registered to Tyler Aviation, Inc., was substantially damaged during landing at the Spartanburg Downtown Memorial Airport, Spartanburg, South Carolina. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 positioning flight. The commercial-rated pilot, the sole occupant, was not injured. The flight originated from the Greenville Downtown Airport, Greenville, South Carolina, about 2145.

The pilot stated that the purpose of the flight was for his night currency. Before departure, he was advised by the Anderson Flight Service Station that the only thunderstorm activity was located east of Spartanburg, his planned destination; the thunderstorm was dissipating. While taxiing to takeoff, the controller advised him that the thunderstorm appeared to be over the destination airport, but it was beyond the radar coverage area. The pilot elected to depart and while in contact with Greer Approach Control, he was advised that the thunderstorm was over the airport. He changed to the UNICOM frequency for verification and was advised of the wind direction and velocity and, "...there was just light rain [sic] coming down [sic] altho there was much [sic] lightening and thunder in the [sic] vacinity." He activated the runway lights using the UNICOM frequency, had good visibility, then switched back to Greer Approach Control. He advised the controller that based on the information given to him by the person monitoring the UNICOM, and with the airport in sight, he was inbound to land. As he switched back to the UNICOM frequency, "...it started raining much harder..."; however, he had the airport in sight and elected to continue. The airplane was landed in the first 1/4 of the runway that was covered with water and, "I let the aircraft coast for a little so as to slow down before [sic] breaking action was initiated however the aircraft would not slow down as usual. I commenced [sic] breaking action at about the half way point but I could feel the tires slipping [sic] haveing very little effect on speed reduction." He also reported deploying the speed brake with little effect. The airplane traveled off the end of the runway, down an embankment, and collided with a guard rail.

Postcrash examination of the runway and accident site by a FAA airworthiness inspector revealed that white deposits were noted on the runway beginning about 1,000 feet before the departure end, and continued to the end. The airplane rolled onto a grass overrun traveling 158 feet, descended, impacted onto a road, then a guard rail, coming to rest about 196 feet from the departure end of the runway. The brakes were examined and found to operative with no evidence of preimpact failure or malfunction. Braking action was evident in the grass beyond the departure end of the runway.

Review of the landing distances chart for the airplane revealed that based on the temperature and airplane weight, the ground roll distance was calculated to be about 1,420 feet. The chart is for predicated on full flaps extended, and a hard surface runway. A

correction for wet runway surface is not included.

According to the Executive Director of the South Carolina Organ Procurement Agency, Inc., (S.C.O.P.A.), her agency had arranged with Tyler Aviation, Inc., to fly tissue on the evening of the accident from Spartanburg, to Charleston, South Carolina.

Review of a certified re-recording of the weather briefing revealed that about 2011 local, on the day of the accident, a person who identified himself as Toby Tyler with the accident airplane registration, contacted the Anderson Automated Flight Service Station (AFSS). He stated that the airplane was at the Greenville Downtown Airport, flying to Charleston in a couple of hours. The pilot was advised of a severe thunderstorm watch covering the whole state of South Carolina, and, "the only thing I see so far is one thunderstorm east of Greer, moving east, and looks like uh its deteriorating...." Review of a South Carolina Aeronautical Chart revealed that the eastern edge of the city of Greer as depicted, is located about 12 nautical miles west of the center of the Spartanburg Downtown Memorial Airport.

According to an employee from a fixed base operator who was working on the night of the accident, he received a phone call about 2100 hours from Lifeguard Flights advising him that an airplane would be landing about 2200 to pick up tissue from an ambulance. At about 2140, the pilot called on the UNICOM frequency for an airport advisory and he advised the pilot that it was raining and the wind was from 035-042 degrees at 10 knots. At about 2150, he observed the lights from the airplane approaching runway 5 and noted that the rainfall had increased considerably as the approach was being made. He did not see the airplane land, but he went outside to wait for the airplane to taxi to the ramp. He was then advised by phone that the airplane had crashed and drove to the crashsite where he was advised that the pilot was alright. He then drove back to the office and when he arrived, the ambulance was already there. He advised the ambulance personnel that the airplane had crashed and noted that they were concerned about the status of the tissue.

Pilot Information

Certificate:	Commercial	Age:	56, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	March 20, 1998
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	9500 hours (Total, all aircraft), 139 hours (Total, this make and model), 9500 hours (Pilot In Command, all aircraft), 65 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	North American	Registration:	N944RJ
Model/Series:	T-28B T-28B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	138130
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	November 21, 1997 Annual	Certified Max Gross Wt.:	8600 lbs
Time Since Last Inspection:	21 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	11059 Hrs	Engine Manufacturer:	Curtis Wright
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	R1820-86B
Registered Owner:	TYLER AVIATION, INC.	Rated Power:	1425 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:	GSP ,972 ft msl	Distance from Accident Site:	13 Nautical Miles
Observation Time:	21:55 Local	Direction from Accident Site:	270°
Lowest Cloud Condition:	Clear	Visibility	6 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	25°C / 22°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	GREENVILLE , SC (GMU)	Type of Flight Plan Filed:	None
Destination:	(SPA)	Type of Clearance:	None
Departure Time:	21:45 Local	Type of Airspace:	Class G

Airport Information

Airport:	SPARTANBURG DOWNTOWN MEM SPA	Runway Surface Type:	Asphalt
Airport Elevation:	801 ft msl	Runway Surface Condition:	Wet
Runway Used:	5	IFR Approach:	None
Runway Length/Width:	5203 ft / 100 ft	VFR Approach/Landing:	Full stop

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:	34.94062,-81.920532(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	DWAYNE S PITTSBARGER; W. COLUMBIA , SC
Original Publish Date:	February 11, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=38524

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](#).