

CIVIL AERONAUTICS BOARD  
**ACCIDENT INVESTIGATION REPORT**

Adopted: July 31, 1947

Released: August 1, 1947

**DELTA AIR LINES, INC.,—COLUMBUS, GEORGIA—APRIL 22, 1947**

**The Accident**

A Delta Air Lines DC-3, NC-49657, and a BT-13, NC-55312, collided when landing at the Muscogee County Airport near Columbus, Georgia, at approximately 1040, April 22, 1947. The crew and all of the passengers aboard the DC-3 consisted of Delta Air Lines personnel. The pilot was the sole occupant in the BT-13. After collision, the airplanes crashed to the ground and burned, resulting in fatalities to all.

**History of the Flight**

On April 22, 1947, at approximately 1004, George Cushing, an airline transport pilot, the vice-president in charge of operations for Delta Air Lines, departed Macon, Georgia, flying NC-49657, a Delta Air Lines DC-3 airplane. Aboard were seven other company officials. The party was en route to Columbus, Georgia, to transact company business in reference to the establishment of ground facilities for a new route. The aircraft reported over Columbus at 1034, and was observed circling the Muscogee County Airport preparatory to landing.

At approximately 1030 of the same day, J. C. Russell, a private pilot, departed from the Columbus Municipal Airport, which is located approximately four miles south of the Muscogee County Airport. His exact flight path is not known; however, he arrived in the vicinity of the Muscogee County Airport at about the time that the Delta aircraft entered the traffic pattern for landing. After entering the traffic pattern, the DC-3 made one and one-half circles to the left around the field; and then, approximately 2,500 feet from the airport boundary, turned left onto final approach for a landing on Runway 5. The BT-13 did not circle the field. It approached from the southeast and made a long shallow turn to the right onto final approach for landing on Runway 5. Upon completing this turn, the BT-13 was above and slightly to the right of the Delta airplane.

The two airplanes progressed toward the end of Runway 5 for landing, the vertical distance between the two airplanes closing, the one remaining almost directly above the other. When Delta's flight was approximately 10 feet above the ground, the BT-13 settled on the empennage of the DC-3 just ahead of the rudder and vertical fin. An immediate application of power was made by the pilot of the DC-3, as the tail of the aircraft was forced down from the collision. The BT-13 remained lodged on the tail surface of the DC-3 as it zoomed to approximately 120 feet above the runway. Both airplanes then crashed to the ground and burned.

**Investigation**

The fuselage of Delta's DC-3, from the trailing edge of the wing forward, was completely destroyed by impact with the ground and fire. The flap operating cylinder was found in the fully extended position.

\*All time referred to herein is Eastern Standard Time and based on the 24-hour clock.

tion. The landing gear latch was found locked and attached to the left gear. Bends and breaks in the propeller blades were opposite to the direction of rotation, indicating application of power at the time of impact.

The fuselage of the BT-13, except for the main structural tubing, was consumed by fire to a point two feet back of the rear cockpit. Markings and bends of the propeller blades indicated that little, if any, power was being developed at the time the two airplanes crashed to the ground.

The Delta aircraft was a converted Army C-47, equipped with Pratt & Whitney (R 1-31-22) engines. It was certificated January 1946, and the last inspection was accomplished 14 hours prior to the time of the accident. All evidence indicates that the airplane was properly certificated and entirely airworthy. The BT-13 was a modified Army trainer certificated May 5, 1946. Since the time of certification, it had been flown less than 80 hours and had not received, at the time of the accident, a 100-hour periodic inspection. Several 20-hour and visual inspections had been made by Gary Wood King, the operator of the Columbus Municipal Airport where the aircraft was stationed. Mr. King stated that the BT-13 was airworthy and in good condition.

The pilot of the DC-3, George R. Cushing, age 40, had logged a total of 11,091 hours. He had no known physical disabilities and had, on April 16, 1947, flown with James A. Bickerstaff, a senior air carrier inspector, and had successfully passed a proficiency check as an airline transport pilot. From the investigation, it was not possible to determine who was sitting in the co-pilot seat of the DC-3 at the time of the crash. The evidence tends to indicate that it was Clayton Berry, Superintendent of Airport Construction for Delta Air Lines. One witness, an ambulance driver, stated that he recovered two bodies which were located in the forward part of the wreckage and separated from the rest. These two bodies were later identified as George Cushing and Clayton Berry. Clayton Berry held a private pilot certificate and had a total of 47 hours of flight time in light aircraft October 11, 1946.

J. C. Russell, age 39, was a private pilot and had approximately 2,000 flying hours, about 75 of which were in BT-13 airplanes. During the war, Mr. Russell had flown numerous coastal scouting missions for the Civil Air Patrol. He was considered a careful, consistent pilot by Gary Wood King, the manager of the Columbus Municipal Airport where Mr. Russell stationed his aircraft. Just before Mr. Russell took off on the day of the accident he held a conversation with Mr. King. Mr. King stated that Russell appeared normal in every way. Mr. King also stated that he believed Russell was wearing his glasses. A second class medical certificate issued to Mr. Russell in 1944 indicates that he was required to wear glasses to meet Civil Air Regulation standards.

Weather during the entire morning of the accident was good. At the time of the crash there were high,

thin, scattered clouds; visibility was 9 miles; and wind was 10 miles an hour from the east northeast.

Traffic at the Muscogee County Airport was controlled by a wind "Tee." According to the testimony of the airport manager the "Tee" was fixed pointing in the direction of traffic, unless wind velocity was 15 miles per hour or more, in which case it was allowed to swing freely. Direction of traffic and other information was transmitted by the Eastern Air Lines' station manager at Muscogee to all Eastern aircraft approaching for landing. Delta's flight had not requested the use of Eastern's radio facilities and no other radio or traffic control facility was available on the field.

## Discussion

Four witnesses in the immediate vicinity of the DC-3 flight path observed the aircraft on final approach for landing. Their testimony is to the effect that the Delta airplane held a straight course for at least 2,500 feet before crossing the airport boundary. Other witnesses stated that the turn into the field was low, steep, and very close to the end of the runway. These witnesses, however, were located on the airport considerably removed from the aircraft's flight path, and were accordingly unable to observe accurately either the aircraft's altitude or true distance from the field.

The preponderance of the evidence indicates that the Delta aircraft circled the Muscogee County Airport one and one-half times to the left, then turned left onto final approach for landing on Runway 5. It held a straight course, as stated above, for a distance of at least 2,500 feet before crossing the airport boundary. The flight was described by witnesses to be similar to those of Eastern Air Lines' airplanes landing on the field. From all evidence, it appears that the Delta approach for landing was accomplished in accordance with rule and regulation.

Jack Day, a painter, was located approximately one mile southwest of the field and in line with Runway 5. He is the only reliable witness who observed the flight path of the BT-13 prior to the time that it appeared over the DC-3 on final approach. According to his testimony, the BT-13 made a long, shallow turn from the right. Such an approach would have given no clear indication of whether a landing was actually intended. As Captain Cushing circled the field for landing, the BT-13 would have been flying southeast of the traffic pattern and contrary to the direction of traffic. Under such circumstances, it would have been extremely difficult for Captain Cushing, or any other pilot in the air at that time, to determine what was actually intended by the pilot of the BT-13. It seems, therefore, that either Captain Cushing saw the BT-13 south of the field and dismissed it from further attention because it was out of the traffic pattern and did not indicate an intention to land, or that the BT-13 was not observed at all.

While the existence of a traffic control tower might have prevented this accident, the absence of such a tower made it all the more important that all traffic conform to the established pattern. Even though Mr. Russell, the pilot of the BT-13, did not fly a standard left hand pattern, and even though he

did not observe other aircraft landing, he might have been alert for a red or green light directed to him from a control tower. Such a facility could have warned both the BT-13 and the DC-3 by light signals and radio.

A period of over one hour was required to extinguish the flames since no mobile fire or crash equipment was located at the Muscogee County Airport. However, it is highly doubtful whether the presence of such equipment would have been helpful in this case since it is likely that no one survived the impact.

## Findings

Upon due consideration of all available evidence, the Board finds that:

1. Aircraft NC-49657, the Delta DC-3, and Aircraft NC-55312, the BT-13, were properly certificated and in airworthy condition immediately prior to the accident.
2. George R. Cushing, pilot of the DC-3, and J. C. Russell, pilot of the BT-13, were properly certificated and well qualified to make their flight.
3. Delta Air Lines' flight of April 22 was made to transact company business in reference to the establishment of ground facilities at Columbus, Georgia.
4. Weather during the entire morning of the accident was good. At the time of the crash there were high, thin, scattered clouds; visibility was 9 miles; and wind was 10 miles an hour from the east northeast.
5. The only traffic control facility existing on the Muscogee County Airport was a wind "Tee."
6. The Delta DC-3 made one and one half circles around the airport in a standard left hand traffic pattern, then turned left onto final approach for a landing on Runway 5.
7. The pilot of the BT-13 did not observe the Delta aircraft on its final approach, nor did he conform to a standard left hand traffic pattern around the airport, but made a long shallow right turn southeast of the field onto final approach for landing on Runway 5.
8. The pilot of the BT-13 completed the turn onto final approach so as to be almost directly above the DC-3, and remained in that position during the remaining course of the landing approach. The BT-13 struck the empennage of the DC-3 when the DC-3 was approximately 10 feet above Runway 5.

## Probable Cause

The Board determines that the probable cause of this accident was the failure of the pilot in the BT-13 to fly a standard left hand pattern in his approach to the airport and to keep a diligent lookout for other traffic.

BY THE CIVIL AERONAUTICS BOARD:

/s/ Oswald Ryan  
/s/ Harilee Branch  
/s/ Josh Lee  
/s/ Clarence M. Young

James M. Landis, Chairman of the Board, did not take part in the decision.

# Supplemental Data

## Investigation and Hearing

The Civil Aeronautics Board received notification of the accident at 1048, April 22, 1947, and immediately initiated an investigation in accordance with the provisions of Section 702 (a) (2) of the Civil Aeronautics Act of 1938, as amended. Air Safety Investigators of the Board's Atlanta office proceeded to the scene of the accident immediately, arriving at approximately 1410 the same day. A public hearing was ordered and held in Columbus, Georgia, May 8, 1947.

## Air Carrier

Delta Air Lines, Inc., is a Louisiana corporation with headquarters in Atlanta, Georgia. The company had been granted rights by the Civil Aeronautics Board to operate into Columbus, Georgia, but at the time of this accident the service had not been established. The flight was conducted to establish ground facilities for the proposed route.

## Flight Personnel

Captain George R. Cushing, age 48, pilot of the DC-3, held Airman Certificate No. 511, with an airline transport pilot rating, and multi-engine land rating 420 to 6,600 h.p. He had a total of 11,091 hours in the air as a pilot, of which 1,800 hours were in DC-3 type airplanes. Captain Cushing had flown 67 hours in the six months preceding the accident and 54 hours of that time had been in NC-49657, the airplane that crashed. The last flight physical examination was accomplished by

Doctor W. O. Martin, April 2, 1947, at which time Captain Cushing was found fit for flying.

Joseph C. Russell, age 39, pilot of the BT-13, held an Airman Certificate No. 92614-14 with a private pilot rating. He had over 2,000 hours in the air, and was considered a careful competent pilot.

It is not definitely known who was sitting in the right seat of the DC-3 at the time of the accident. Evidence indicates that it may have been Clayton Berry. Mr. Berry, age 33, held an Airman Certificate No. 96591, with a private pilot rating, and possessed a total of 47 flight hours October 11, 1946.

## The Aircrafts

NC-49657 was a converted Army C-47, certificated in January of 1946. Engines were Pratt & Whitney, Model 1830-92. At the time of the accident the left engine had a total of 2,783 hours, and 309 hours since the last overhaul. The aircraft had been flown 2,899 hours and 14 hours since the No. 1 check. All records and evidence indicated that the aircraft was in an airworthy condition prior to the accident.

NC-55312, the BT-13, was a modified Army trainer. It was certificated at the Tuskegee Aviation Institute, Tuskegee, Alabama, and certificated there May 20, 1946. The aircraft had less than 100 hours flight since the date of certification. All records and evidence indicated that the aircraft was in an airworthy condition prior to the accident.