File No. 4817-43

Docket No. SA-85

Adopted: March 25, 1944

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REPORT OF THE CIVIL AERONAUTICS BOARD

On the investigation of a mid-air collision between two local instruction flights, which occurred near Spokane, Washington, on October 26, 1943.

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on the
Investigation of a Mid-Air Collision Between
Two Local Instruction Flights

A mid-air collision which occurred approximately 10 miles north of Calkins Air Terminal, Spokane, Washington, about 10:18 a.m. on October 26, 1943, resulted in fatal injuries to the two solo student pilots, Thane M. Spahr, flying Aeronca 65-TL, NC 31333, and William Brown Ryan, flying Waco UPF-7, NC 29984. Both aircraft, owned by the Defense Plant Corporation and being operated by the Calkins Aircraft Company (hereinafter referred to as the operator), were demolished. The two pilots, both War Training Service trainees, held student pilot certificates. Spahr had flown approximately 174 and Ryan 236 hours.

CONDUCT OF INVESTIGATION

The Washington Office of the Civil Aeronautics Board (hereinafter referred to as the Board) was officially notified of the accident and immediately dispatched Senior Air Safety Investigator Charles F. Lienesch from the Seattle Office of the Safety Bureau of the Board to the scene. He arrived there at 5:30 p.m. on October 26, 1943. The Board initiated an investigation in accordance with the provisions of Section 702 (a) (2) of the Civil Aeronautics Act of 1938, as amended. In connection with the investigation a public hearing was held on November 4, 1943, in Spokane, Washington. William K. Andrews, Chief, Investigation Section, Safety Bureau of the Board, served as presiding officer, and Investigator Lienesch participated. The transcript and exhibits of the hearing have been docketed as SA-85 and are filed in the Docket Section of the Board.

Upon the basis of all the evidence resulting from the investigation and hearing, the Board now makes its report in accordance with the provisions of the Civil Aeronautics Act of 1938, as amended.

History of the Flights

Spahr, flying solo from the rear seat of Aeronca NC 31333, took off from Calkins Air Terminal about 9:38 a.m. with verbal instructions from his instructor to climb to 3000 feet and practice high altitude maneuvers, then descend to 500 feet above the ground and practice low altitude maneuvers. The instructor stated that he did not assign Spahr to any particular practice area but left that to the discretion of the student. He assumed that Student Spahr would use a small practice area three miles west-southwest of the airport, which Spahr had previously used regularly. This practice area lies eight miles south of the area wherein Ryan was expected to practice and where the collision occurred. Ryan, flying solo from the front seat, took off from the same airport in Waco NC-29984 at approximately 9:49 a.m. for a practice area about 8 miles north of the airport to practice a sequence of both low and high altitude maneuvers.

About 10:18 a.m. witnesses observed the two planes approach each other from opposite directions at an altitude estimated to have been 500 feet. Both aircraft were in straight and level flight when they collided head-on,

interlocked and fell to the ground. Neither plane was observed to make any attempt to avoid the other, indicating that the pilots apparently did not see each other.

Evidence indicated that the propeller hub of the Aeronca struck the right side of the Waco's engine. The wreckage was so entangled and distorted that little could be learned of the condition of either plane prior to the collision.

The weather was suitable for the flights involved and was not a contributing factor to the accident. Both Spahr and Ryan wore parachutes but apparently made no attempt to use them as both safety belts were found fastened.

Operational Procedure

The operator holds a WTS Army secondary instructor training contract. Each student receives 15 hours time in light Aeronca airplanes and 40 hours in the heavier and faster Waco planes. Approximately 15 aircraft are engaged in flight operations at one time. There have been established three practice areas: One three miles west-southwest of the airport; one eight and a half miles north; and one fourteen miles northwest. These areas were outlined on a map which was posted in the Operations Office. This map had been submitted by the operator to CAA General Inspection several months previous to the accident and the operator, having heard nothing further, considered it officially approved.

Students were instructed to practice both high and low altitude maneuvers within a single flight period without stipulation as to the sequence in which these maneuvers should be executed. There was a sort of general rule in effect that the practice areas were not to be overcrowded, but what constituted overcrowding was left to the discretion of the student and there was no provision for checking to determine whether or not this discretion was properly used. With the selection of a practice area left to the student it was naturally impossible for the operations flight office to know how many aircraft were being flown simultaneously in any one practice area. Subsequent to a collision accident at Missoula, Montana, on September 10, 1943, the WTS Regional Office issued a general bulletin suggesting each WTS operator designate and assign definite practice areas to each airplane. This procedure had not been put into effect by the subject operator, nor had it been required of him by the resident CAA representative.

Corrective Action

Subsequent to the accident a large scale map of the area in the vicinity of Calkins Air Terminal was prepared outlining in detail the individual practice areas. This map is on display in the operations office. The names of the instructors and students and the NC identifying numbers of the aircraft are to be continually posted thereon. The clearance officer on duty will assign practice areas and not more than one aircraft will be assigned to an area at the same altitude in a given period.

Another collision accident involving the same operator, and in which the occupants of both aircraft escaped injury, occurred while the planes

were landing at the same airport October 25, 1943, the day previous to the subject accident. This collision resulted in considerable damage to both aircraft. Without any effective control or adequate separation of traffic, there existed a probable hazardous condition inasmuch as student pilots were utilizing the same runways for take-offs and landings in the Waco aircraft as well as the slower and lighter Aeronca planes.

The WTS contract with the operator contains the following clause, "If a control tower is not available, it is necessary that such means be furnished by the contractor, either by use of lights, flags or similar means to simulate traffic control procedure. It is a responsibility of the contractor to select and designate such competent personnel as may be needed for traffic control under such simulated condition. A flight instructor observing solo practice may be designated for this purpose." However, fulfilment of this clause of the contract, as quoted, had not been accomplished by the operator, or required by the CAA, since Civil Air Regulations were interpreted by the CAA representative, based upon written instructions from his superiors, to provide that all traffic control be accomplished by certificated Air Traffic Control personnel only, and such personnel were not considered available. The corrective action taken subsequent to this accident resulted in the dividing of the 300-foot wide runways with a plainly visible white line with one side designated for the faster and the other for the slower type airplanes. Strict regulation of taxying, take-offs, and landings at the airport has also been inaugurated.

Findings

1. The mid-air collision which occurred at approximately 10:18 a.m., on October 26, 1943, between NC 31333 and NC 29984 resulted in fatal injuries to two WTS student pilots. Both aircraft were completely demolished.

2. The collision occurred at an altitude of about 500 feet approximately 8 miles north of the Calkins Air Terminal at Spokane, Washington.

3. There was no evidence of mechanical failure of either aircraft prior to the collision.

4. Weather conditions in the area were satisfactory for flying and did not contribute to the accident.

5. Both aircraft were in straight and level flight when they collided head-on.

6. There was no evidence to indicate that either student was engaging in reckless or unauthorized maneuvers.

7. There was evidence that the subject WTS operator was lax in his operating procedure in that sufficient measures for safely handling traffic had not been put into effect, and that the method of assigning students to practice areas was inadequate for safety.

8. The necessary safety measures specified in the WTS contract and in the general bulletin of the WTS Regional Office were not observed by the operator.

PROBABLE CAUSE

Lack of vigilance of both student pilots in failing to observe and avoid the other.

APPROVED:

/s/ L. Welch Pogue
L. Welch Pogue

/s/ Edward Warner
Edward Warner

/s/ Oswald Ryan
Oswald Ryan

/s/ Josh Lee
Josh Lee

Harllee Branch, Member of the Board, did not take part in the decision.