

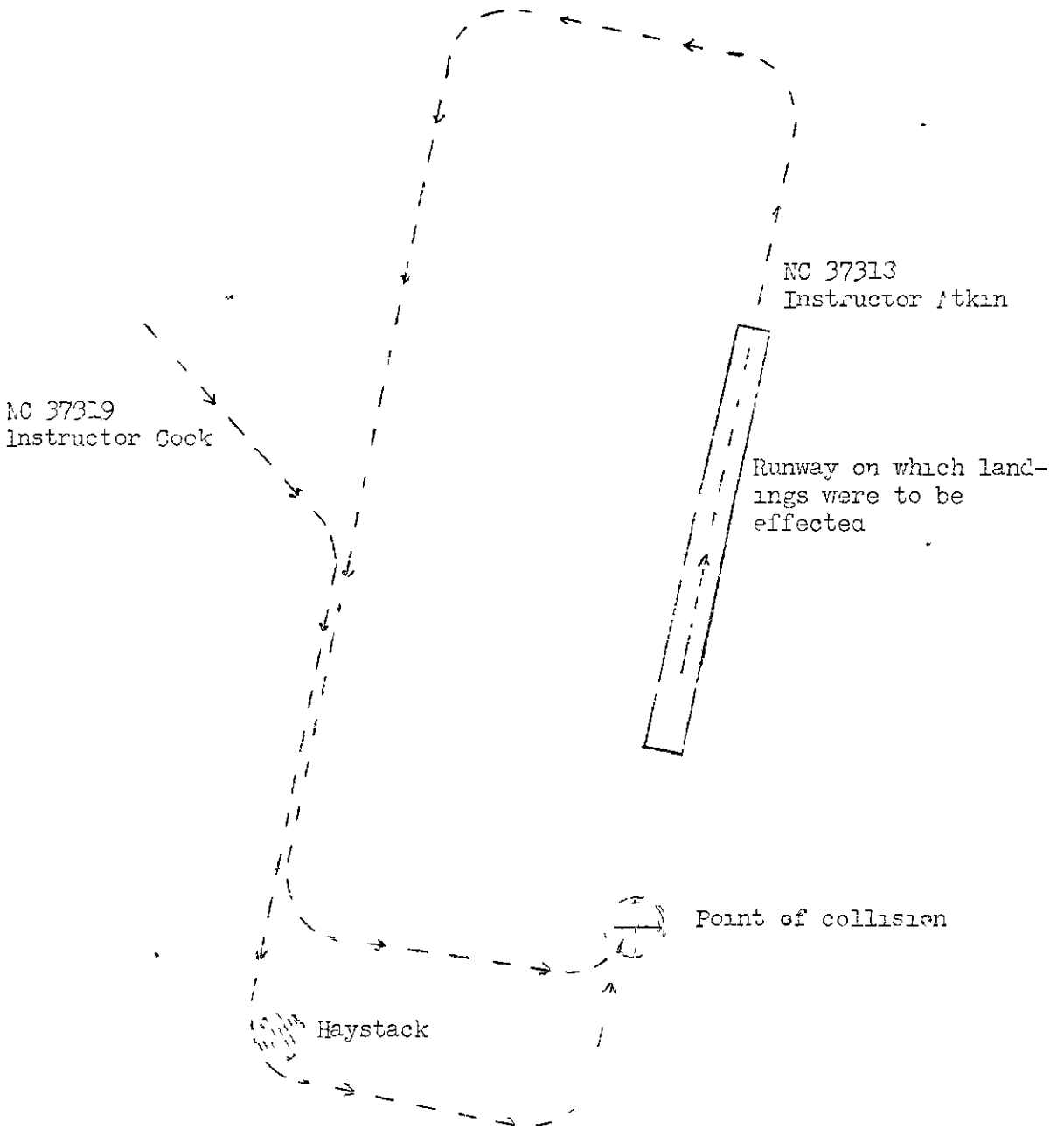
REPORT OF THE CIVIL AERONAUTICS BOARD  
on the  
Investigation of a Mid-Air Collision Between Two  
Local Instruction Flights

A mid-air collision which occurred at Cedar City Airport, Cedar City, Utah, at approximately 8:35 a.m. on August 27, 1943, resulted in serious injuries to Instructor Leland Theodore Cook and his student, Robert R. Christian, in aircraft NC 37319, and minor injuries to Instructor Norman Miller Atkin and his student, Raymond E. Adamowitz, flying NC 37318. Instructor Cook held a commercial pilot certificate with single-engine land, 0-80 h.p., and flight instructor ratings. He had flown approximately 163 solo hours, all in the type aircraft involved. Christian, a War Training Service trainee, was receiving his fifth lesson at the time of the accident. Instructor Atkin held a commercial pilot certificate with single-engine land, 0-80 h.p., and flight instructor ratings. He had accumulated approximately 517 hours of solo flight time, all in the type aircraft involved. Student Adamowitz, a War Training Service trainee, was receiving his second lesson at the time of the accident. Instructors Cook and Atkin occupied the rear seats of the aircraft involved. The two aircraft, Interstate Cadets, Model S-1A, were demolished. They were owned by the Defense Plant Corporation, Washington, D.C. and were being operated by the South Utah Flying Service in the War Training Service program.

Instructor Cook and Student Christian, returning to land at the Cedar City Airport, entered and followed the traffic pattern, according to regulations, and about one-half way down on the downwind leg headed in a southerly direction. Instructor Atkin and Student Adamowitz, after practicing elementary maneuvers, had returned to the subject airport and were engaged in take-off and landing practice. They were in the pattern behind Cook, about one-quarter way down the downwind leg, also heading in a southerly direction. A third plane, flying at the same altitude and piloted by Instructor Raymond Duerksen, entered the pattern just in front of Atkin and headed in the same direction. In an apparent effort to cut off Duerksen, Atkin cut his turn short about 500 feet before reaching the prescribed turning point in the pattern from the downwind leg onto the base leg. Meanwhile, Cook, in the lead, had made his turn from the downwind leg and was flying the base leg well ahead of Duerksen, who was still on the downwind leg. Atkin continued, heading east inside the base leg, and then entered a shallow gliding left turn onto his approach leg. At an altitude of approximately 150 feet his flight path converged with that of Cook, who meanwhile had followed the proper base leg path, made his approach turn and was gliding in a straight course on the approach leg preparing to land. A collision followed and the two planes interlocked and fell together to the ground. (See sketch, Page 2.) Duerksen continued his flight on the regular pattern and landed his airplane.

Investigation revealed that Duerksen entered the traffic pattern between Cook and Atkin with less than the 500 feet horizontal spacing prescribed by regulations. He stated that he increased his speed as he "realized that the distance of 500 feet that must be maintained was approaching the border line" and that his distance ahead of Atkin "might have been less than 500 feet, or approximately 400 feet." Atkin stated to the investigator for the Board that he became very much irritated when Duerksen entered the pattern "just ahead" of him, and in his written statement concerning the accident he estimated the distance at 200 feet. He also stated that he made

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his turn from the downwind leg onto the base leg at what he termed "my usual turning place," while all of the students and instructors at the airport who were questioned were clear in their understanding that the prescribed ground mark for this turn was a well-defined haystack about 500 feet beyond the point where Atkin turned. According to the assistant chief pilot of the operation, who witnessed the flights involved and the actual collision, neither aircraft made an attempt to alter its course before impact in the air, which would indicate that the pilots failed to observe each other.

The weather was clear and unlimited with a gentle north wind and did not contribute to the accident, except for the possibility that the bright morning sun might have had a somewhat blinding effect on Atkin while he was flying in an easterly direction on the base leg. However, Atkin stated that the sun did not bother him.

From the evidence it is apparent that while Duerksen erred in entering the traffic pattern ahead of an approaching plane under the prescribed horizontal distance of spacing, there can be no justification for Atkin's disregard of local airport and Civil Air Regulations in deliberately passing Duerksen on the left by turning onto the base leg so short that he allowed himself less than the regulation 1000-foot straight-in approach for a landing. The collision occurred approximately 500 feet from the approach end of the runway and Atkin was making his approach turn at the time.

Although Pilot Cook had the right-of-way, he was lax in his failure to observe and avoid the aircraft whose flight path was converging with his own. While the action of Pilot Duerksen was undoubtedly a contributing factor, the probable cause of the accident was the poor and hasty judgment of Atkin, who, in addition to shortening and altering his flight path from that prescribed, also failed to observe and avoid a landing aircraft which was on course and had the right-of-way.

BY THE BOARD

/s/ Irco A. Toombs  
Secretary