

Adopted: December 31, 1943

File No. 3301-43

REPORT OF THE CIVIL AERONAUTICS BOARD
on the
Investigation of an Accident Involving Aircraft
During a Local Instruction Flight

Harold Frederick Wolfe and his student, Jack M. Burns, were fatally injured in an accident which occurred about 1 mile west of the Knoxville Municipal Airport, Alcoa, Tennessee, at approximately 9:15 a.m. on July 29, 1943. Wolfe held a commercial pilot certificate with single-engine land, 0-80 h.p., and flight instructor ratings. He had flown approximately 450 solo hours, all in the type of airplane involved. Burns was a War Training Service trainee at the Wood Flying Service. The aircraft, a Piper J5A, NC 35186, owned by the Defense Plant Corporation, Washington, D. C., and being operated by the Wood Flying Service, was destroyed by impact and fire.

Wolfe and Burns took off from the Municipal Airport about 9:15 a.m. on a dual instruction flight. The take-off was made toward the west, and when the plane had reached an altitude of approximately 600 feet, it nosed down into a steep glide and disappeared behind a hill. Shortly thereafter smoke was seen rising from this vicinity and observers who rushed to the scene found the plane in flames, resting on its nose in an open field approximately one mile west of the airport. Evidence indicated that the aircraft had struck nose-first at an angle of about 50° with the ground. There were no known witnesses to the actual impact.

Inspection of the controls revealed that the turnbuckle assembly located at the up-elevator horn had separated in flight, resulting in complete loss of up-elevator control. The absence of safety wire on any of the parts of the subject turnbuckle indicated quite definitely that it had not been installed prior to the flight. Normal vibration and movement of the elevator controls would cause the turnbuckle barrel to unscrew from its terminals unless it had been safetied. The aircraft and engine mechanic in charge of the last 20-hour check stated that he had instructed his helpers to replace the safety wire on all turnbuckles in the control system. It is probable that during this work the safety wire was removed from the subject turnbuckle and not replaced.

The manner in which the propeller was broken indicated that no power was being developed at the time of impact. The stabilizer was found set in the nearly full nose-down position. Since the design of the stabilizer adjusting mechanism on this model airplane is such that impact of the plane with the ground would not alter the position of the stabilizer, it must be concluded that the surface was set in the "nose-down" position before the airplane crashed. Whether the pilot turned the stabilizer adjusting control wheel the wrong way, thereby increasing the nose-heavy trim of the plane, could not be determined. Proper use of the stabilizer control and power might have enabled him to recover from the steep glide.

Maintenance and inspection at this base appeared to be very lax. The operator stated that his quota of students had increased so rapidly that it had been impossible to give the airplanes the attention they should have had. Inspection of the maintenance records indicated in several cases that airplanes had been flown considerably in excess of the prescribed 100-hour maximum time between periodic inspections as called for by the regulations. The mechanic in charge stated that it was not his practice to personally inspect work which he had assigned to his helpers but that he took their word as to what they had done.

As a result of this investigation, War Training Service officials suspended operations at the Wood Flying Service until the maintenance crew, under the supervision of CAA Aircraft Inspectors, could run a complete 100-hour check on each aircraft operated by this school.

The probable cause of this accident was loss of control which followed parting of the unsafetied elevator control cable turnbuckle in flight, due to careless maintenance.

BY THE BOARD

/s/ Fred A. Toombs
Secretary