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National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: March 13, 1990

In reply refer to: A-90-16 through -19

Honorable James B. Busey
Administrator
Federal Aviation Administration
Washington, D.C. 20591

On April 15, 1989, a Cessna 152, N93748, crashed on final approach to runway 28 at the DuPage Airport, West Chicago, Illinois. The student pilot, the sole occupant, was fatally injured, and the airplane was destroyed.^{1/}

The student pilot, who had flown 33 total hours, had been practicing approaches and full-stop landings in the traffic pattern for about 30 minutes. On the fourth circuit of the traffic pattern, the student pilot was following another Cessna 152, N6497M (N97M), the pilot of which was conducting touch-and-go landings; also, the pilot of a Beechcraft King Air 90, N20, was holding short of runway 28 awaiting clearance for takeoff.

The recorded radio transmissions reviewed by Safety Board investigators revealed that at 1350:15, the pilot of N20 advised the DuPage tower east local controller that he was ready for departure on runway 28. The local controller issued directions to N20 to hold short of the runway for landing traffic. At this time, the pilot of N97M was on short final approach for a touch-and-go landing on runway 28. At 13:50:36, after N97M had crossed the runway 28 threshold, the east local controller issued the clearance "King Air two zero taxi into position and hold runway two eight; Cessna seven four eight cleared to land runway two eight." The pilots of N20 and N93748 acknowledged their respective clearances. At 1351:15, the local controller issued takeoff clearance to the pilot of N20. At 1351:21, the pilot of N20 acknowledged the clearance and advised the controller "...we're rolling traffic's in sight climbing out." At 1351:31, an unreadable transmission was made by a female voice believed to have been that of the student pilot of N93748. The local controller stated that the garbled transmission occurred 2 seconds before N93748 crashed.

The controllers in the tower and several pilots awaiting takeoff near the approach end of runway 28 told Safety Board investigators that when N93748 was on short final approach, they observed the airplane in S-turns with bank angles between 30 and 45 degrees. After two or three S-turns were completed, the airplane abruptly nosed down, descended, and struck ground about 580 feet

^{1/} NTSB Field Accident Report BF089FA027, Brief No. 757 (attached).

short of runway 28. These witnesses also informed Safety Board investigators that N20 was in a takeoff position and holding on runway 28 when the Cessna entered the S-turns. The Safety Board believes that the student pilot was doing S-turns because she thought the maneuvers were necessary to provide adequate spacing between her airplane and the King Air on the runway for takeoff. Further, the Safety Board's investigation disclosed that the student pilot's instructor had taught her to use S-turns on final approach as a means of increasing the spacing between her airplane and an airplane positioned ahead of her airplane. Finally, contrary to procedures in the pilot's operating handbook and the airplane flight manual, the instructor stated that he had taught the student to fully retract the flaps from the fully extended position when executing a missed approach procedure.

The Safety Board believes that flight instruction that includes the above techniques and procedures is erroneous and improper and that the FAA should attempt to correct such improper instructions through its recurrent flight instructor refresher courses and any other means available.

The investigation revealed that the pilot of N93748 identified herself as a student pilot on her initial contact with the DuPage ground controller, as suggested by the Airman's Information Manual, paragraph 193c. The ground controller told Safety Board investigators that he had not passed that information to the local controller in this instance but sometimes had done so in other instances. The local controller handling the accident airplane was a developmental controller being monitored by a full-performance level controller who was conducting on-the-job training. The local instructor controller and the local developmental controller stated they were not aware that the pilot of N93748 was a student. They stated, however, that they frequently provide air traffic control (ATC) services to student pilots. The instructor controller also stated he provides more careful handling and is more attentive to an airplane when he is aware that it is being flown by a student pilot.

The Airman's Information Manual, paragraph 193c(1), states:

The FAA desires to help the student pilot in acquiring sufficient practical experience in the environment in which he will be required to operate. To receive additional assistance while operating in areas of concentrated air traffic, a student pilot need only identify himself as a student pilot during his initial call to an FAA radio facility.

Paragraph 193c(2) states:

This special identification will alert FAA ATC personnel and enable them to provide the student pilot with such extra assistance and consideration as he may need. This procedure is not mandatory.

The manual, however, does not state what extra assistance a student pilot may expect or receive. The Safety Board believes the manual should include such information.

In their review of the Air Traffic Control Handbook (7110.65F), investigators determined that there are no directives requiring ATC personnel to pass student pilot identification between controllers or to other ATC facilities. Additionally, the handbook provides no guidelines about what additional assistance or consideration ATC personnel should provide to a student pilot, as specified in paragraph 193c of the Airman's Information Manual. Had the ground controller transferred the student pilot identification, the local controller could have used the information to determine sequence and separation of N93748 in the traffic pattern. If the local controller believed it necessary to expedite the departure of N20, he might have chosen a different option for the Cessna, had he known the pilot of the Cessna was a student. He could have cleared the pilot of the Cessna to take one of the following actions: extend the downwind leg; make a "three sixty"; follow a different aircraft; or execute a missed approach. The information might have also alerted the local controller to question the actions of the student pilot and to provide the student extra assistance and consideration when he observed the Cessna in the S-turns. At that point he could have directed the King Air to taxi off the runway until after the Cessna had landed.

The Safety Board believes that the Air Traffic Control Handbook should require controllers to pass on student pilot identification. Also, it should include guidelines and controller responsibilities for providing additional assistance and service to student pilots.

Therefore, as a result of its investigation, the National Transportation Safety Board recommends that the Federal Aviation Administration:

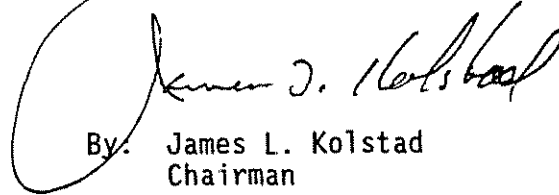
Emphasize in its recurrent flight instruction refresher courses and any other means available the need to teach adherence to procedures specified in the pilot's operating handbook and the airplane flight manual and the need to teach adherence to the necessity of flying a stabilized final approach for landing. (Class II, Priority Action)(A-90-16)

Amend the Air Traffic Control Handbook, 7110.65F, to require that student pilot identification be passed between controllers and between air traffic control facilities after initial receipt of the identification. (Class II, Priority Action) (A-90-17)

Amend the Air Traffic Control Handbook, 7110.65F, to include guidelines and controller responsibilities for providing additional assistance and service to student pilots. (Class II, Priority Action) (A-90-18)

Amend the Airman's Information Manual to include guidelines and controller responsibilities for providing additional assistance and service to student pilots so that the student pilots will know what to expect from air traffic control when they identify themselves as student pilots. (Class II, Priority Action) (A-90-19)

KOLSTAD, Chairman, COUGHLIN, Acting Vice Chairman, LAUBER and BURNETT, Members, concurred in these recommendations.



By: James L. Kolstad
Chairman