



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Date: December 17, 1992

In reply refer to: A-92-111

To Aviation Trade Associations
(See mailing list attached)

The Safety Board recently completed a study on alcohol and other drug involvement in fatal general aviation accidents that occurred from 1983 through 1988.¹ Despite a downward trend in alcohol-involved fatal general aviation accidents, about 6 percent of the fatally injured pilots in the study were flying while impaired. The mean blood alcohol concentration (BAC) of the alcohol-positive pilots was 0.15 percent, nearly four times the 0.04-percent BAC offense level established by current Federal Aviation Administration (FAA) regulations. More than 95 percent of the alcohol-positive pilots had a BAC that exceeded the 0.04-percent BAC offense level, more than 74 percent had a BAC that exceeded the 0.10-percent level established as illegal for drivers by most of the driving-while-intoxicated laws enacted by States, and more than 47 percent had a BAC that exceeded 0.15 percent.

The high BAC levels found in this study are similar to the high BAC levels found in a 1984 Safety Board study.² The Board is concerned about alcohol involvement in general aviation accidents because of its adverse effect on performance. Research has demonstrated that BACs below 0.04 percent can produce impairment.

Data from the recent study indicate that substance abuse countermeasures are especially necessary for pilots with high BAC levels and for pilots who have limited flying experience.

¹ National Transportation Safety Board. 1992. Alcohol and other drug involvement in fatal general aviation accidents, 1983 through 1988. Safety Study NTSB/SS-92/03. Washington, DC.

² National Transportation Safety Board. 1984. Statistical review of alcohol-involved aviation accidents. Safety Study NTSB/SS-84/03. Washington, DC.

Pilots-in-command in the alcohol-involved fatal general aviation accidents tended to have less flying experience than did pilots in the substance-free accidents.³ Further, the percentage of pilots with student certificates was three times greater in the alcohol-involved group than in the substance-free group. The difference may indicate a lack of understanding by student and recently certificated pilots about the effects of alcohol impairment on a person's ability to perform flying tasks and to make sound judgments. It may also indicate a need for greater emphasis in ground school and by certified flight instructors on the effects of alcohol and drug use to create a better understanding among students and inexperienced pilots. Of those pilots with a BAC of 0.15 percent or higher, 17.7 percent held a student certificate.

Ground school can serve an important role in the education of new pilots on the effects of alcohol and other drugs on performance. However, ground school instructors and class materials (including textbooks) may address alcohol and other drugs primarily in terms of FAA regulations (the 0.04-percent BAC offense level established by the FAA, and the "8-hour rule") and limit the amount of information pertaining to the effects on performance.⁴ Although the instructors and textbooks address alcohol and other drugs, the Safety Board is concerned that the emphasis is not adequate.

Because ground school must cover many topics that are critical to learning about the operation of an airplane, there is a continuing need after ground school and flight training for educational and informational material that pertains to the effects of alcohol and other drugs on pilot performance, not only for pilots with limited flying experience but for all pilots as well. The need for materials on alcohol was previously addressed in the 1984 Safety Board study. The Board recommended that the FAA develop educational and classroom materials on the subject and distribute them through its accident prevention program to appropriate FAA personnel, pilots, fixed-base operators, flying clubs, flight schools, and flight instructors (Safety Recommendation A-84-47, issued May 4, 1984). Based on the action taken by the FAA, and the FAA's plans to develop new materials as information became available, the Safety Board classified the recommendation as "Closed--Acceptable Action" on February 19, 1985. A similar recommendation was issued

³ As used in this letter, substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

⁴ The "8-hour rule" is contained in Title 14 Code of Federal Regulations Part 91.17. The rule prohibits a person from acting or attempting to act as a crewmember within 8 hours after the consumption of any alcoholic beverage.

to the Aircraft Owners and Pilots Association, the National Agricultural Aviation Association, and the National Association of Flight Instructors urging the organizations to disseminate to their members information on the dangers of alcohol use in aviation (A-84-51, issued May 4, 1984). Based on the actions taken by the organizations, the Safety Board classified the recommendation as "Closed--Acceptable Action" on August 27, 1987.

The efforts taken by the FAA and various organizations to inform pilots about the effects of alcohol on flying may have helped to reduce the incidence of alcohol involvement in fatal aviation accidents. However, considering the high BAC levels found in the recent Safety Board study and the 1984 study, additional efforts appear to be warranted to prevent pilots from flying while impaired.

The Safety Board believes that the recent reductions in drunk driving on the highways can be attributed to legislative action, improved law enforcement, citizen advocacy, and to the development and promotion of intervention programs. Highway safety advocates started personal intervention programs with public information messages more than 20 years ago (such as "Friends Don't Let Friends Drive Drunk") and have expanded them to include actions that persons other than the impaired driver may take to prevent a person from driving while intoxicated (for example, "Take the keys," don't ride with a drunk driver, report drunk drivers). The Safety Board believes that peer intervention programs directed at general aviation could also reduce the incidence of flying while impaired by alcohol or other drugs, which, in turn, should reduce the number of accidents attributed to impairment.

Materials that advocate intervention and that relate techniques to successfully and safely intervene when a pilot attempts to fly while impaired would enhance current or future programs that promote aviation education, safety, and accident prevention. These materials, such as brochures and the display of posters at FAA Flight Standards District Offices, fixed-base facilities, and airports, should be directed toward persons in a position to intervene; for example, other pilots, passengers, fixed-base operators, flight instructors, aviation personnel, and friends and family of flight crewmembers. Further, intervention should also be promoted through mailings to certificate holders and flight instructors, and material for aviation periodicals and other media.

As a result of its safety study, the Safety Board recommended that the FAA develop and disseminate educational and informational materials on alcohol and drug use and on intervention. The Board believes that, in addition to the FAA, organizations representing pilots, fixed-base operators, flight instructors, and State aviation officials should be part of the efforts to reduce the number of general aviation accidents involving alcohol or other drugs through educational and informational materials.


Therefore, as a result of its safety study, the National Transportation Safety Board recommends that the Aircraft Owners and Pilots Association, the Experimental Aircraft Association, the National Agricultural Aviation Association, the National Air Transportation Association, the National Association of Flight Instructors, and the National Association of State Aviation Officials take the following action:

With the assistance of the Federal Aviation Administration, develop and disseminate, as appropriate, any new educational and informational materials that may be needed on (a) the effects of alcohol and other drugs on flying and in general aviation accidents, and (b) procedures or actions that will encourage pilots, fixed-base operator personnel, flight instructors, Flight Standards District Office personnel, aviation safety specialists, and family and friends of pilots to intervene when a general aviation pilot attempts to fly after consuming alcohol or using other drugs. (Class II, Priority Action) (A-92-111)

Also as a result of its safety study, the Safety Board issued recommendations to the Federal Aviation Administration, and to the Governors and Legislative Leaders of the States.

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation A-92-111 in your reply.

Chairman VOGT, Vice Chairman COUGHLIN, and Members LAUBER, HART, and HAMMERSCHMIDT concurred in this recommendation.


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