



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Log H-535A

Date: September 28, 1989

In reply refer to: H-89-31 and -32

Honorable Thomas D. Larson
 Administrator
 Federal Highway Administration
 400 Seventh Street, S.W.
 Washington, D.C. 20590

About 6:45 a.m., central standard time, on November 19, 1988, a Greyhound bus with 45 occupants, traveling southbound through a construction zone on Interstate Highway 65 in Nashville, Tennessee, suddenly went out of control during a steering maneuver, rotated 190 degrees clockwise in the southbound lanes, overturned on its left side, and came to rest facing northbound on the southbound embankment. The unrestrained bus driver and 38 passengers were injured in the accident. Twelve passengers sustained serious injuries, and the bus driver, and 26 passengers received minor injuries. Six passengers were not injured.¹

It was raining at the time of the accident, and the bus was in the right travel lane. Two cars passed the bus on the left, and one of them moved in front of the bus to let the other go by. The following distance between the bus and the next vehicle in front was therefore diminished. The bus driver indicated that he was uncomfortable with this situation and chose to steer into the left lane. The bus driver was unable to complete the lane change before the bus slid into a closed lane adjacent to the left travel lane, knocking over several channelizing barrels. The bus driver was able to introduce a rightward steering maneuver, but while the front of the bus moved rightward, its rear began to track leftward. As a result, the bus began the clockwise rotation.

The bus driver testified that he was traveling at 45 mph (which was the posted regulatory speed limit in the construction zone) at the time of the accident; however, he also indicated that he had not looked at his speedometer since entering the construction zone. Because of the rain, limited visibility, and wet road conditions, even that speed may have been too high for the prevailing conditions. However, passenger and witness statements indicated that the speed was actually significantly greater than 45 mph, with one witness placing it at 65 mph. The Safety Board therefore

¹For more detailed information, read Highway Accident Report--"Greyhound Lines, Inc., Intercity Bus Loss of Control and Overturn, Interstate Highway 65 in Nashville, Tennessee, November 19, 1988" (NTSB/HAR-89/03).

performed calculations to develop estimates of the speed of the bus prior to the accident.

Considering these calculations, which were based on tire marks and the definable conditions under which the bus tires would hydroplane,² the Safety Board concluded that the speed of the bus prior to the accident was 60 to 65 mph. It was this excessive speed that led the bus to go out of control and overturn. Furthermore, high speed exacerbated the effects of decreased coefficient of friction, which the bus encountered in the move from the right lane, which was asphalt pavement, to the left, which was concrete; and the high speed resulted in hydroplaning as the bus moved back toward the right. Thus, if the bus driver had been operating the bus at a speed appropriate for conditions, instead of nearly 20 mph over the posted speed limit, the sequence of events that comprise this accident would not have occurred.

The Safety Board also believes that the bus driver demonstrated poor judgment when he decided to change lanes instead of slowing down. If he had slowly decelerated the bus without attempting to change lanes, it is likely the accident could have been avoided.

The Bus Driver's Record.--The Safety Board could find no evidence that the bus driver's speeding was the result of pressure from the company to make up time or meet a schedule. In fact, driving a Greyhound bus 60-65 mph in conditions of steady rainfall and in a construction zone where the speed limit is 45 mph is not only contrary to State law and Federal regulation, it is also contrary to specific company rules. The failure to wear a lapbelt while driving a Greyhound bus is contrary to both Federal regulation and company rules. This disregard for rules is consistent with a pattern of disregard for rules and regulations the bus driver established even before he was hired by Greyhound. The bus driver reported two accidents and two speeding violations on his Greyhound employment application in 1971.

Less than 90 days after he was hired by the bus line, during his initial probationary period, he was involved in an on-duty accident. Prior to this accident in Nashville, the bus driver had been involved in 10 other accidents while operating buses for Greyhound. Although five of these accidents were classified as nonpreventable, five were classified as preventable by Greyhound officials. The bus driver's record also includes six traffic citations, five for speeding and one for failure to yield, according to Greyhound's files. In addition, he was charged on three occasions with infractions of company rules. The bus driver had been suspended four times by the company and discharged (but later reinstated) once.

²Hydroplaning occurs when a vehicle traveling on wet pavement reaches a speed at which water pressure builds up under the tires. As contact diminishes between the tires and pavement, it becomes increasingly difficult for a driver to maintain directional stability. Ultimately, the ability of the tires to develop braking and turning forces can be completely eliminated.

On the day of the accident, the bus driver was operating a type of vehicle whose handling characteristics were very familiar to him. The route was one he had driven frequently during his career, and he had encountered the construction zone repeatedly for several weeks preceding the accident. After 17 years with Greyhound, the bus driver was not lacking in experience, but rather, a proper regard for the rules of safe driving.

Greyhound is required under Federal regulation to review the record of each of its drivers at least once a year, to determine whether he or she continues to meet the Federal minimum standards for safe driving. In 1986 and 1987 the annual review of the accident bus driver's record was not conducted by any of the bus driver's supervisors, but instead by one supervisor's secretary. Those annual reviews may have been conducted in accordance with the letter but certainly not with the intent of 49 CFR 391.25. In part, that Federal regulation stipulates:

In reviewing a driving record, the motor carrier must consider any evidence that the driver has violated applicable provisions of the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. The motor carrier must also consider the driver's accident record and any evidence that the driver has violated laws governing the operation of motor vehicles, and must give great weight to violations, such as speeding, reckless driving, and operating while under the influence of alcohol or drugs, that indicate that the driver has exhibited a disregard for the safety of the public.

To be accomplished properly, such subjective assessments must be made by someone who is familiar with all aspects of the driver's record. In addition, that person should be qualified to interpret the information and have the authority to impose measures based on the findings, such as training, disciplinary action, reassignment, or discharge. A supervisor conversant with safe bus-operating practices would be more qualified to serve this function than a secretary (or any other person) who was not specifically trained for this function. However, Greyhound was not in violation of Federal regulation when the supervisor's secretary conducted the annual review of the bus driver, because 49 CFR 391.25 does not specify the qualifications required of the reviewing official. Certainly, a review of the bus driver's violation record could be performed by a nonsupervisory person if provided adequate guidelines with which to base an assessment of the bus driver's record. However, the determination of whether the bus driver is fit to continue driving or is in need of additional training should be made by a supervisor knowledgeable about driving operations. The Safety Board believes the regulation should be amended to clarify those qualifications.

Company Evaluation of Driver's Medical Condition and Vision.--As required by Federal regulation, the bus driver was periodically examined by physicians, and Greyhound used the results of these examinations to determine his continuing fitness for service. He has also been under the care of personal physicians and optometrists. Concerning both general health and

vision, there have been significant discrepancies between the findings of the company-designated physicians and those of the personal practitioners.

In the two examinations for which Greyhound was able to provide records, the bus driver's blood pressure was measured and reported to have been at levels that are within the standards established by the Federal Highway Administration (FHWA). The bus driver, though, had a clinical history of hypertension. Similarly, following the bus driver's 1986 company physical examination, he was certified to drive without corrective lenses; but examinations by personal optometrists in 1986 and 1989 indicated not only visual acuity that would require the use of corrective lenses under FHWA standards, but also other vision problems such as blurred vision and problems with bright lights and night vision. The Safety Board could not determine the reasons for these sharply differing results in objective medical and vision tests.

The bus driver knew that he had vision problems and that he was being treated for high blood pressure (though he may not have recognized the term hypertension). In addition, even though he may not have known the clinical terms for his other conditions, such as hypothyroidism and depressive neurosis with anxiety reaction, he probably did recognize that there were additional conditions in his medical history that might adversely affect his driving ability. Yet the bus driver did not notify the company physician about the diagnosis and treatment of these conditions. And the bus driver also did not disclose them when he filled out the written medical history forms as part of his biennial physical examinations.

The purpose of the federally required biennial examination is explained in the instructions given to examining physicians:

In the interest of public safety, the examining physician is required to certify that the driver does not have any physical, mental, or organic defect of such a nature as to affect the driver's ability to operate safely a commercial motor vehicle.³

Such an authoritative finding was not made for this bus driver, and one reason may have been his failure to disclose his full medical history, or to direct the examining physician to the personal physicians who could do so. There was nothing compelling the bus driver to make such a full disclosure. Greyhound does require that medical history forms be completed at each physical examination, but there is no explicit requirement, in either Greyhound policy or Federal regulation, that the forms be filled out in a manner that is not only accurate but also complete.

One means of encouraging bus drivers to give a full accounting is to require them to vouch for the information they are providing. At present there is a place on the physical examination form for the bus driver to sign, permitting the report on the examination to be sent to Greyhound. If a bus

³49 CFR 391.43(c).

driver were also required to certify by that signature that he or she has made a full and truthful disclosure, this might ensure greater vigilance in filling out the form.

Such certification already exists in the aviation industry. The following statement is from the Federal Aviation Administration's Form 8500-9 for medical certification of pilots:

I hereby certify that all statements and answers provided by me in this examination form are complete and true to the best of my knowledge, and I agree that they are to be considered part of the basis for issuance of any FAA certificate to me. I have also read and understand the Privacy Act statement that accompanies this form.

NOTICE: Whoever in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or who makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years, or both. (U.S. Code, Title 18, Sec. 1001.)

In addition to the foregoing, the Safety Board believes the signed statement should also give the examining physician the authority to obtain additional information on the bus driver if such information is necessary. Further, the statement should prohibit significant omissions and require the bus driver to notify the certifying physician if his medical condition changes following the examination.

The Safety Board believes the medical history information specified in 49 CFR 391.43 could be misunderstood by drivers. It is possible that the bus driver in this accident did not understand that his high blood pressure was a "cardiovascular disease" or that depressive neurosis with anxiety reaction is considered a "psychiatric disorder," both of which are terms used in the Greyhound form, as stipulated by the Federal regulation. The Safety Board believes that the section establishing the bus driver's medical history should be more comprehensive, utilizing commonly understandable terminology. An example would be to include "high blood pressure" and "heart condition" under the heading "cardiovascular disease."

In 1983 the Safety Board made the following recommendation to the FHWA:

H-83-68

Revise Federal Motor Carrier Safety Regulation 49 CFR 391.43 to incorporate a provision, similar to that specified in 14 CFR 67.20(a) for airmen medical certification, which will prohibit the falsification or

omission of medical information in connection with a medical certification physical examination.

In 1988 the FHWA issued a final rule that prohibits falsification of information on an employment application, certificate, or record required by Federal regulation.⁴ The Safety Board subsequently classified Safety Recommendation H-83-68 as "Closed-Acceptable Action." However, the rule does not prohibit omission of information, and a driver can simply choose, as the individual in this case did, not to answer completely a question that might reveal a medically disqualifying condition. The Safety Board believes that revisions to the FHWA's rules were generally responsive to the Board's recommendation. However, as a result of this accident, the Safety Board recognizes that further revisions are needed to ensure that adequate medical history information is available to physicians during biennial physical examinations.

Therefore, the National Transportation Safety Board recommends that the Federal Highway Administration:

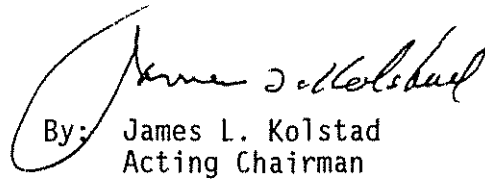
Revise Section 391.43 of the Federal Motor Carrier Safety Regulations to: incorporate a provision that will prohibit the omission of medical information in connection with a medical certification physical examination; require that when commercial drivers are examined, they sign a statement certifying that the medical history they have provided is both complete and accurate and that the motor carrier has the authority to obtain information on the bus drivers' medical history from their personal health care providers; and require that the medical history form elicit more complete information on drivers, using commonly understandable terminology. (Class II, Priority Action) (H-89-31)

Revise Section 391.25 of the Federal Motor Carrier Safety Regulations to specify the qualifications of the individuals conducting the reviews of commercial drivers' performance records, required annually of motor carriers. (Class II, Priority Action) (H-89-32)

Also, as a result of its investigation, the Safety Board issued Safety Recommendations H-89-26 through -30 to Greyhound Lines, Inc. and H-89-33 to the Tennessee Department of Transportation.

⁴The rule, published May 19, 1988, was included in the Federal Motor Carrier Safety Regulations as 49 CFR 390.35.

KOLSTAD, Acting Chairman, and BURNETT, LAUBER, NALL, and DICKINSON, Members, concurred in these recommendations.


By: James L. Kolstad
Acting Chairman

