National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: January 14, 2000

In reply refer to: H-00-01 and -02

Ms. Rosalyn G. Millman
Acting Administrator
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, DC 20590

About 4:05 a.m. on June 20, 1998, a 1997 Motor Coach Industries 47-passenger motorcoach, operated by Greyhound Lines, Inc., was on a scheduled trip from New York City to Pittsburgh, Pennsylvania, traveling westbound on the Pennsylvania Turnpike near Burnt Cabins, Huntingdon County, Pennsylvania. As the bus approached milepost 184.9, it traveled off the right side of the roadway into an "emergency parking area,"[1] where it struck the back of a parked tractor-semitrailer, which was pushed forward and struck the left side of another parked tractor-semitrailer. Of the 23 people on board the bus, the driver and 6 passengers were killed; the other 16 passengers were injured. The two occupants of the first tractor-semitrailer were injured, and the occupant of the second tractor-semitrailer was uninjured.[2]

After the accident, one passenger said that the bus was "pitch black" following the accident. She stated that because no lights were on, the passengers had difficulty finding the emergency exits, thus slowing the evacuation. At one point, a passenger ignited a cigarette lighter to provide interior illumination, even with the smell of fuel fumes present. When the emergency responders arrived on scene, wounded passengers were trapped within the vehicle, and the interior of the bus was completely dark. Fortuitously, the first arriving emergency response vehicle had a generator to provide lighting; otherwise, the emergency responders had only flashlights to light the rescue operations before the arrival of a heavy-duty rescue mutual aid department. Interior emergency lighting would have helped not only the passengers in their attempt to evacuate the bus, but also the immediate emergency responders in their effort to find and treat trapped and incapacitated passengers.

[1] The 28-foot-wide 1,000-foot-long area off the roadway was used for vehicular parking.

[2] For further information, see National Transportation Safety Board. 2000. *Greyhound Run-off-the-Road Accident, Burnt Cabins, Pennsylvania, June 20, 1998*. Highway Accident Report NTSB/HAR-00/01. Washington, D.C.

Other modes of transportation, such as aviation, rail, and marine, have requirements for provision of emergency lighting during crash rescue operations. For example, in the aviation industry, carriers are required to install, and to ensure that passengers are aware of, interior emergency floor lighting, which in the event of an emergency illuminates a pathway to emergency exits. In all modes of transportation, the provision of emergency lighting decreases the likelihood of injury or death from either panic or the inability to find an available exit that may have been obvious during daylight.

The Safety Board has long believed that the capability to evacuate intercity-type buses rapidly in emergencies is essential. In September 1986, as a result of its investigation of an October 1984 truck-bus head-on collision near Laredo, Texas,[3] the Safety Board asked the Federal Highway Administration (FHWA), in conjunction with the National Highway Traffic Safety Administration (NHTSA), to adopt standards to require emergency interior lighting for intercity-type buses that is of sufficient intensity and duration to aid occupants in identifying available exit routes and to aid rescuers in assisting injured occupants (Safety Recommendation H-86-63). After the FHWA responded on November 20, 1986, that it did not find sufficient justification to issue standards for emergency interior lighting for intercity buses, this recommendation was classified "Closed—Unacceptable Action" on March 5, 1987. Currently, no Federal standards for motorcoaches include provision of an alternate light source in the event of an accident in which the main light source has been damaged and no longer provides interior lighting.

The Safety Board concluded that the lack of Federal standards requiring motorcoaches to be equipped with reliable emergency lighting fixtures with a self-contained independent power source puts passengers in jeopardy and can hamper emergency response. Therefore, the Safety Board believes that NHTSA should revise the Federal Motor Vehicle Safety Standards (FMVSS) to require that all motorcoaches be equipped with emergency lighting fixtures that are outfitted with a self-contained independent power source.

One of the passengers said that when evacuating the bus, everyone used the same emergency exit window to escape. He stated that he did not understand why the other windows did not automatically open when the accident occurred. He added that at first it appeared impossible to escape since, because of the darkness, no way out was apparent. Although he had years of experience riding Greyhound buses, he said he never noticed the emergency signage indicating the exit locations and the instructions on how to use them. Another passenger stated that she evacuated the bus through an exit already opened by another passenger and was the second to exit the bus because she had observed the window being opened. The Safety Board concluded that the emergency egress of the passengers was impeded because the motorcoach lacked easily identifiable interior emergency instruction signage.

Moreover, the first emergency responders who arrived on scene stated that they were unsure of how to enter the accident bus and saw no signage for entry locations or emergency

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[3] National Transportation Safety Board. 1985. *1982 Eagle Charter Coach Head-on Collision with 1983 Ford Pickup Truck, near Laredo, Texas, October 20, 1984*. Highway Field Report NTSB/HFR-85/02. Fort Worth, Texas.

exits. According to the emergency responders, without the assistance of the Greyhound busdriver who had stopped after the accident, they would not have been able to immediately gain access to the interior of the vehicle to assist the injured.

Currently, the FMVSS provide guidance only on the location of emergency signage and on what the signage should state. Furthermore, the FMVSS have no requirement that, in the event of an emergency in which normal lighting conditions do not exist, the emergency exits must be visible to the passengers. Title 49 *Code of Federal Regulations* 571.217.S5.5.2 states that in buses, other than school buses, each marking shall be legible when the only source of light is the normal nighttime illumination of the bus interior. However, this requirement does not consider whether the signage is visible without the normal nighttime illumination of the interior when the vehicle has been in an accident and the main power source is no longer available. The Safety Board concluded that the current FMVSS are not comprehensive enough because the standards fail to recognize the need for interior luminescent and exterior retroreflective emergency signage in the event that interior lighting is not present during an accident or other emergency. The Safety Board believes that NHTSA should revise the FMVSS to require the use of interior luminescent or exterior retroreflective material or both to mark all emergency exits in all motorcoaches.

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

> Revise the Federal Motor Vehicle Safety Standards to require that all motorcoaches be equipped with emergency lighting fixtures that are outfitted with a self-contained independent power source. (H-00-01)

> Revise the Federal Motor Vehicle Safety Standards to require the use of interior luminescent or exterior retroreflective material or both to mark all emergency exits in all motorcoaches. (H-00-02)

Also, the Safety Board issued Safety Recommendations H-00-03 through -05 to the Pennsylvania Turnpike Commission; H-00-06 through -09 to Greyhound Lines, Inc.; H-00-10 to the United Motorcoach Association; and H-00-11 to the American Bus Association.

Please refer to Safety Recommendations H-00-01 and -02 in your reply. If you need additional information, you may call (202) 314-6440.

Chairman HALL and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in these recommendations.

[Original Signed]

By: Jim Hall
Chairman