



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

SP-20
70911/82 438B

Date: September 2, 1986

In reply refer to: H-86-64

Mr. Norman R. Sherlock
President
American Bus Association
1025 Connecticut Avenue
Washington, D. C. 20036

About 5:10 a.m. on October 20, 1984, a 1983 Ford pickup truck crossed the center line of U.S. Route 59, about 40 miles east of Laredo, Texas, and collided head-on with the left front of a westbound Transportation Enterprises, Inc., intercity charter tour bus. ^{1/} The bus, a 1982 Eagle Coach, was transporting a church group from Houston, Texas, to Nuevo Laredo, Mexico, and was following a second charter tour bus at an estimated 55 miles per hour. After impact, the bus continued about 140 feet before stopping, and the pickup truck caught fire. The busdriver, the pickup truck driver, and a truck passenger were killed. Toxicological tests of the truck driver's blood revealed a blood alcohol content (BAC) of .22 percent. Tests for the busdriver were negative. ^{2/}

The Safety Board's investigation of this accident revealed a number of safety issues which have been addressed in the past by the Board and which indicate the need for action to improve passenger safety. The impact with the pickup truck destroyed the electrical circuits of the bus. As a result, the only light source for interior illumination for the bus passengers was burning fuel from the truck located to the left rear of the bus. Initially, some passengers escaped from the damaged bus through a fixed panel window that someone had kicked out. The main loading door was inoperative, and escape through the available side window emergency exits was delayed because the darkness made it difficult for passengers to locate the windows and to read the nearby emergency exit instructions. Several minutes after the collision, headlights from approaching vehicles provided intermittent illumination so passengers could identify and operate side window emergency exits.

^{1/} "Intercity bus" as referenced in this recommendation letter is defined as a for-hire bus that is more than 10,000 pounds gross vehicle weight rating and transports more than 20 passengers.

^{2/} Highway Field Report—"1982 Eagle Charter Coach Head-on Collision with 1983 Ford Pickup Truck, near Laredo, Texas, October 20, 1984" (NTSB FTW-85-H-FR02).

The investigation also revealed a problem with the procedures for operating the side window emergency exits. At the time of manufacture, foil-faced, stick-on decals that identified the location and operation of each of the eight side window emergency exits were installed on the interior sidewalls as required by Federal Motor Vehicle Safety Standard (FMVSS) 217(5.5.1). However, at the time of the accident, only three exit windows were properly marked. Two exit windows did not have any type of markings on either the interior sidewall or the window sash, and a number of markings at other windows were disfigured due to wear and/or vandalism. Only two passenger seating areas not located directly below an exit window retained their markings indicating the location of the nearest available exit; these markings are required by FMVSS 217(5.5.2).

The interior sidewall of the bus, in the area between the passenger floor level and the bottom of the side windows, was covered by a plastic laminate material about 1/8 inch thick. As the bus structure collapsed and shifted due to impact forces, the laminate material shattered into pieces with knife-like edges. Several small pieces were propelled into the front area of the coach, and many of the pieces showed evidence of occupant contact. At least one exit window marking decal was displaced from its original position as the laminate material separated from the sidewall.

Passengers reported that, because of the difficulties in exiting the bus, all of the injured passengers were not evacuated until 30 to 45 minutes after the accident. The loading door at the right front of the bus was inoperative due to structural deformation, and passenger access to the front windshield opening was obstructed by interior damage and personal belongings. In addition, passengers were confronted with an exit-to-ground height of more than 7 feet. To jump or fall from this height could have resulted in injury. The absence of a locking device to hold open the exit windows hindered their use. Because the exit-to-ground height was too great to allow a person standing outside the coach to hold the windows in an open position, one passenger within the bus held the window open, thereby occupying space in the evacuation area and increasing the evacuation time.

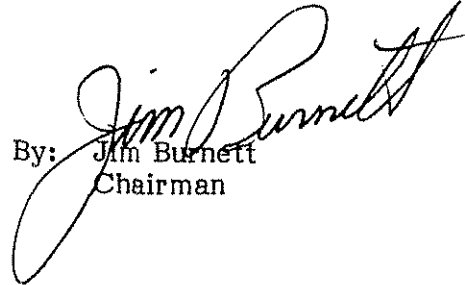
The Safety Board continues to believe that the capability for rapid emergency evacuation of intercity-type buses is essential and that bus interiors can be improved to mitigate occupant injuries in an accident. Therefore, the National Transportation Safety Board recommends that the American Bus Association:

Initiate action to have bus/coach manufacturers develop intercity-type bus body designs that would allow an emergency exit no higher than the passenger floor level for use when the passenger loading door is inoperative or inaccessible. (Class II, Priority Action) (H-86-64)

Also as a result of its investigation of this accident, the Safety Board made Safety Recommendations H-86-59 through -62 to the National Highway Traffic Safety Administration and H-86-63 to the Federal Highway Administration.

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 H-86-64 in your reply.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and LAUBER and NALL, Members, concurred in this recommendation.

By: 
Jim Burnett
Chairman

