

V. RECOMMENDATIONS

1. The Safety Board recommends that the Federal Highway Administrator expedite the proceeding initiated under Part II of the Interstate Commerce Act, docket Ex Parte No. MC-69, dated May 27, 1966, "to inquire into the operations of motor carriers of passengers in order to determine whether it is necessary or desirable to adopt regulations and establish standards which would require carriers to install, provide, and maintain seat belts for the use of passengers and drivers." The experience in this case indicates definitely that restraint of drivers and occupants in their seats under rollover conditions is necessary to reduce initial injury, disorientation, and thus insure more likelihood of timely post-crash escape from the vehicle. This report and the Safety Board's conclusion should be seriously considered by the Federal Highway Administrator in reaching his decision concerning a requirement that seat belts be available in buses. The Safety Board urges that a decision be made on this important matter which had been under consideration for more than 22 months at the time this accident occurred, and more than 30 months prior to the date of this report.

H-68-18

2. The Safety Board recommends that the Federal Highway Administration, in its development of motor vehicle safety performance standards, review all motor vehicle fuel systems, including diesel fuel; and power steering, and brake systems. Also, in the establishment of crash barrier criteria, full consideration should be given to intrusion factors and flammability of fuels and fluids used in these systems.

H-68-20

(# H-68-19 not used)

3. The Safety Board recommends that the Federal Highway Administration review those characteristics of floors intended to be required by Federal Regulation 293.85 (49 Code of Federal Regulations) with a view to rewriting the requirement in terms of specific and verifiable performance tests. This accident reveals that the fire resistance requirement for floors does not insure isolation of fires to any specific degree. H-6821

4. The Safety Board recommends that the Federal Highway Administration revise Regulation 293.65 as it applies to liquid fuel tank requirements to specify crash impact resistance to rupture and intrusion in terms of performance tests that are applicable to all types of liquid fuel tanks -- including diesel fuel -- not just gasoline. H-6822

5. The Safety Board recommends that the Federal Highway Administration include in its motor vehicle safety performance standards a performance requirement concerned with the prevention or control of discharge from fuel tanks subject to compression ruptures or mechanical intrusion. Consideration should be given to existing means, such as liners of the self-sealing type, flexible bladders, and reticulated foam-filled tanks. A similar recommendation, applying primarily to tank trucks carrying flammable fluids, was made to the Federal Highway Administration in the Safety Board's report, released March 7, 1968, on the railroad-highway grade-crossing accident which occurred in H-6823

Ev .t, Massachusetts, on December 28, 1966. This recommendation refers to Docket 3-2 of the National Highway Safety Bureau as well as to Motor Carrier Safety Regulations.

6. The Safety Board recommends that the Federal Highway Administration continue its support^{1/} of State Highway Department research and application of remedial measures to avert or redirect wrong-way traffic movements at expressway, freeway, and multilane divided highway ingress and egress points. This research effort should be expanded and consideration given to the development and application of measures to avert or redirect wrong-way traffic movements which occur on a roadway at points other than those used for ingress and egress. Directional arrows applied at regular intervals, rumble strips, signs, and other signal systems might be considered.

H-68-24

The Safety Board further recommends that the Federal Highway Administration advise the National Joint Committee on Uniform Traffic Control Devices of the effective measures developed to redirect wrong-way traffic movements which occur on a roadway at points other than those used for ingress and egress; and, urges the National Joint Commission to implement these measures on a National basis in the most expedient manner at its command.

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^{1/} State of California Department of Public Works, Transportation Agency, Report on Wrong-Way Driving, Phases I, II, and III. Prepared in cooperation with FHWA, DOT.

7. The Safety Board recommends that the Federal Highway Administration, as soon as possible, change the basis of its regulatory requirements intended to insure escape from buses so that they are based upon tests of performance of occupants in escaping from buses standing or lying in all basic attitudes. In the development of test criteria, it is suggested that consideration be given to test procedures presently employed by the Federal Aviation Administration for the regulation of the adequacy of escape techniques and systems. Further, consideration should be given to adopting for buses, the airline practice of placing emergency escape instructions at each passenger location. It is further recommended that necessary regulations be expedited to insure that no new types of buses go into service which have not been tested to insure that all occupants can escape rapidly when the bus is in any of its basic attitudes after a crash. This recommendation refers to Docket 2-10 of the National Highway Safety Bureau, as well as to Motor Carrier Safety Regulations.

H-68-25

8. The Safety Board recommends that the bus manufacturing industry and the motor carrier bus users consider the lesson of escape in this accident, and initiate their own performance tests of the escape capabilities of buses in each of their basic attitudes.

H-68-26

9. The Safety Board recommends that the Safety Programs Services of the Federal Highway Administration develop a program

H-68-27

igned to produce a sense of individual responsibility in the general public to protect the Nation's highways from drinking drivers, enlisting in such a program the aid of the news media, the producers of alcoholic beverages, private and public agencies concerned with highway safety, as well as religious, educational, and civic groups to (a) support law enforcement efforts against and the prosecution of drinking drivers; (b) impress upon the public individually, each person's serious social duty not to drive while under the influence of alcohol; and (c) individually to accept the responsibility of preventing other persons from driving while under the influence of alcohol.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

/s/ JOSEPH J. O'CONNELL, Jr.
Chairman

/s/ OSCAR M. LAUREL
Member

/s/ JOHN H. REED
Member

/s/ LOUIS M. THAYER
Member

/s/ FRANCIS H. McADAMS
Member

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Adopted: December 18, 1968