

13. The presence of a rear-end protection device on the truck, meeting current Motor Carrier Safety Regulations (Section 393.86), would probably not have prevented the deep underride penetration by the automobile, or the fatal consequences. However, an energy-absorbing device of the dimensions proposed in National Highway Traffic Safety Administration's Notice of Proposed Rulemaking (Docket 1-11) would probably have mitigated the underride impact and penetration.

14. The use of seat belts alone by the automobile occupants did not adequately restrain their forward movement under the circumstances of this accident. The use of a combined shoulder and lap restraint system, in conjunction with a more adequate rear-end protection device on the truck, not now required, would probably have mitigated injuries to a survivable level.

V. PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of this rear-end underride collision was the stopping of a truck in a high-speed traffic lane by an untrained driver operating an unsafe truck with a make-shift hood fastener, which failed and allowed the hood to obstruct the driver's forward view. The driver of a following automobile was not warned by the truck's emergency flasher lights due to a faulty light switch, and the driver's attempt to stop was unsuccessful.

The fatalities in this collision were caused by the absence of any form of rear-end crash protection on the truck, which permitted the automobile to underride the high frame of the truck and allowed the truck frame to enter the passenger compartment through the windshield, nullifying the intended protective effect of the occupants' fastened seat belts.

Contributing factors to this accident were the general neglect by the operating company of maintenance, and other requirements of the Motor Carrier Safety Regulations, and insufficient manpower in the Bureau of Motor Carrier

Safety, Federal Highway Administration, to enforce the regulations.

VI. RECOMMENDATIONS

The National Transportation Safety Board recommends that:

1. The Commonwealth of Virginia (and any other State not having such provisions) consider the revision of its Vehicle Inspection Code, and procedures, to permit the rejection of any vehicle on the basis of any specific incomplete or failed condition which is unsafe, apart from the specific items now listed in the Inspection Code and procedures.

2. The State of Maryland (and any other State not having such provisions) consider the adoption of a provision in its State Motor Vehicle Code to authorize State or local police to remove from the highway any vehicle found to be in unsafe condition, regardless of the State of registration of such vehicle.

3. The Commonwealth of Virginia (and any other State not having such requirements) revise its Motor Vehicle Inspection Standards to bring them into conformance with the National Highway Traffic Safety Administration's Highway Program Standard No. 1, Periodic Motor Vehicle Inspection.

4. The National Highway Traffic Safety Administration, Department of Transportation, reinstate its proposed rulemaking to establish a Federal Motor Vehicle Safety Standard for new buses, trucks, trailers, and combinations in regard to the use of energy-absorbing underride protection devices of the type defined in NHTSA Notice of Proposed Rulemaking, Docket 1-11. Alternatively, NHTSA should determine whether there is a practical plan for standards of voluntary crash protection equipment to be applied, by which occupants of other vehicles could safeguard themselves against the consequences of striking vehicles having high frames which are certain to be underridden.

Such a determination should include the question of whether it is more costly to place crash protection equipment on smaller numbers of high-framed trucks (or trailers) or on the large population of passenger cars.

5. The National Highway Traffic Safety Administration initiate an additional effort to develop Federal Motor Vehicle Safety Standards for bumper protection of motor vehicles to insure predictable and compatible crash performance between vehicles of considerable difference in size and weight.

6. In recognition of the existing manpower limitations in the Bureau of Motor Carrier Safety, Federal Highway Administration, the Department of Transportation seek authorization and appropriations from the Congress to expand the strength and operations of said Bureau to enable it to enforce the regulations,

commensurate with the public's right to safe travel on the Nation's highways.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

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Member

/s/ FRANCIS H. McADAMS
Member

/s/ LOUIS M. THAYER
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