



H-406 Log H-478

# National Transportation Safety Board

Washington, D.C. 20594  
Safety Recommendation

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Date: August 12, 1986

In reply refer to: H-86-58

Agencies, Associations, and Institutes  
interested in transportation of  
farm equipment  
(see attached list)

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The National Transportation Safety Board studied three separate accidents involving the transportation of farm equipment on public roads. Each incident highlights the potential for disaster when inadequate safety precautions are taken. The Board believes that an audio-visual safety program should be developed and promoted to eliminate some of these types of accidents and to help make the transportation of farm equipment on public highways safe.

About 6:25 a.m. on September 12, 1979, a 1976 Dodge van, occupied by 14 senior citizens, overtook and collided with a slow-moving farm vehicle (windrower) near Delta, Utah. <sup>1/</sup> The right front corner of the van struck the left rear edge of the 15 1/2-foot-wide cutting attachment that was mounted on the front of the farm vehicle. The van rolled onto its left wheels, traveled off the right side of the road, and struck a concrete bridge parapet that was located 4 1/2 feet beyond the edge of the pavement. Eight van occupants were killed, and six van passengers were injured; the driver of the farm vehicle was not injured.

The National Transportation Safety Board determined that the probable cause of the accident was the farm vehicle's inadequate rear lighting system, which failed to identify the slow-moving, overwidth windrower as a hazard to higher-speed traffic approaching from the rear, and the van driver's inability to detect and avoid striking the projecting cutting attachment of the windrower while operating at the posted speed limit.

The 18-year-old windrower driver had driven farm equipment for about 8 years. He had a valid Utah driver license and had no previous accidents. He had operated the windrower for about 4 years and had moved it regularly from field to field by way of the highway. He told police that he had previously moved farm equipment on the highway at night; however, he told investigators from the International Harvester Corporation that this was the first time he had moved the windrower in the dark.

<sup>1/</sup> Highway Accident Report--"Van/Slow-moving Farm Vehicle Collision U.S. Route 6/50 Near Delta, Utah, September 12, 1979" (NTSB/HAR-80/02) March 20, 1980.

The driver reported that the windrower was operating with the two front headlamps and the one rear white work lamp illuminated at the time of the accident, and that he was aware that the two amber flashing lamps were not functioning. He was not familiar with the laws regarding the type of lamps required for moving farm equipment on the highway during the dark.

On April 5, 1983, a 2-ton flatbed truck, loaded with one farm plow and towing another farm plow, was traveling southbound on a two-lane, two-way rural highway near Holmesville, New York. 2/ A passenger bus with 20 persons on board was following the flatbed truck at a distance of about 100 feet. As both vehicles entered a 3,820-foot-radius right curve, the towed plow suddenly separated from its hitch attachments and veered left into the opposing northbound traffic lane. A northbound tractor car-carrier semitrailer struck the plow rupturing the tractor's left front tire. As a result, the driver lost control of the vehicle, and the vehicle veered left across the highway centerline and collided head-on with the bus. The busdriver and four bus passengers were killed. The truckdriver of the car carrier and nine bus passengers were hospitalized with injuries. Six additional bus passengers were released by the hospital after treatment.

The National Transportation Safety Board determined that the probable cause of this accident was the towing of a farm plow on a highway at a speed which did not permit the farm plow to track properly behind the flatbed truck and the use of an unapproved tow hitch device. Contributing to the cause was the failure to use safety chains to preclude vehicle separation in the event of a tow hitch failure.

The plow in tow was being delivered to a local farm by Valley Supply Company. At the time of the accident, the 28-year-old driver of the flatbed truck held a valid driver's license with no restrictions. Although the driver's employer would not supply the Safety Board's investigators with the driver's employment history, it was learned that the driver had been driving this type of vehicle for about two years and that he had no formal training on towing procedures. As a result of this accident, the driver was initially charged with "failing to have an SMV emblem on the rear of a slow-moving vehicle" and "using an unauthorized tow hitch." He was later convicted of only the "unauthorized tow hitch" charge and released on a conditional discharge. 3/ No fines or other civil penalties were assessed and no charges were brought against the Valley Supply Company.

On May 9, 1984, the third accident occurred 4/ when about 3:45 p.m., a Savannah, Missouri School District bus transporting 36 students home from school stopped in the northbound lane of a rural 2-lane, 2-direction road to unload passengers. A tractor-trailer, attempting to pass the stopped bus, struck the left rear of the bus with a corn planter which extended 4 feet beyond the truck's flatbed trailer. The corn planter penetrated the bus just about at passenger head height, and continued forward for about 14 feet through the passenger compartment killing four students. After initial impact, both the tractor-trailer and the schoolbus travelled forward and came to rest, occupying the northbound lane and road shoulder, approximately 373 feet from the impact area. In addition to the four fatalities, 16 passengers on the schoolbus were injured.

2/ Highway Accident Report--"Valley Supply Company Truck Towing Farm Plow/Anchor Motor Freight Inc. Car-Carrier Truck/New York-State Association for Retarded Children Bus Collision and Fire, State Route 8, Near Holmesville, New York, April 5, 1983, NTSB/HAR-84/01, April 3, 1984.

3/ Conditional discharge: As a result of being found guilty of non-criminal charges, the judge may impose certain conditions that the defendant must perform. These conditions can be community service, work, certain requirements for operating a motor vehicle, etc.

4/ NTSB accident report number MKC-84-H-SB25.

The 31-year-old truckdriver had a Missouri chauffer license. The unit was owned by St. Joseph's Ford Tractor, Inc., an interstate transport company. The trailer was loaded with a Ford 6610 farm tractor and a Kinze six-row corn planter. The tractor unit had a yellow sign with black lettering affixed to the engine grill indicating "wide load." The tractor-trailer unit was not equipped with any other type of wide load warning devices and no advance warning vehicles were used during the transportation of this farm equipment. The truckdriver was charged with four counts of manslaughter.

Farm equipment is often involved in two serious types of accidents while being transported on the nation's public roads. One type of accident involves large equipment being transported on flatbed trailer or being towed behind a truck. Nationwide data are not available to indicate how many of these types of accidents occur annually. Operators of this type of equipment must realize the hazards of oversized loads and take extra precautions. Vehicles must be operated at appropriate speeds and additional warning signs and lights or perhaps warning escorts in additional vehicles may be warranted. In addition, travel should be restricted to conditions that provide optimum visibility and weather conditions and when traffic volumes are low and during times when schoolbuses or heavy traffic would not be expected on these often narrow "farm to market" roads.

The second type of accident involves farm equipment operating under its own power over public roads. The National Highway Traffic Safety Administration's Fatal Accident Reporting System indicates that in 1984 there were 190 fatal accidents involving "farm equipment - not trucks." Similar measures can be used to prevent these types of accidents. In 1978 the National Safety Council (NSC) estimated that "each year farm machinery is involved in approximately 23,000 accidents on public roads." 5/

Currently, there is no audio-visual educational program available that specifically addresses the safe transportation of farm equipment, either by itself or while being transported by truck or being towed. In the past, the NSC in conjunction with other industries has developed safety programs geared toward specific problems. For example, NSC has been a leader in Operation Lifesaver Program which works to prevent accidents at rail-highway grade crossings. Through the leadership of the NSC and the support of railroads, States, and other groups, the number of fatalities that occur at grade crossings was reduced by over 50 percent between 1971 and 1984. It appears that another program developed by NSC in conjunction with the farm equipment manufacturers and farm associations could target the safe transportation of farm equipment on public highways.

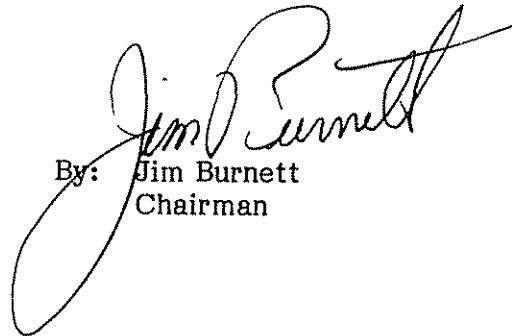
Therefore, as a result of its investigation of these accidents, the National Transportation Safety Board recommends that the National Safety Council, Future Farmers of America, the Farm and Industrial Equipment Institute, National Association of Farm and Ranch Trailer Manufacturers, Inc., National Institute for Farm Safety Association, the National Farm and Power Equipment Dealers Associations, and the U.S. Department of Agriculture:

Work jointly to develop and widely disseminate an audio-visual program to promote the safe transportation of farm equipment on public highways. (Class III, Longer-Term Action) (H-86-58)

5/ "Safe Movement of Farm Equipment on Public Roads," National Safety Council, Bulletin A-013-78, 1978.

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 recommendation 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-86-58) in your reply.

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

A large, stylized handwritten signature in black ink, appearing to read "Jim Burnett". The signature is written over the typed name and title.

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