

Log H-5850



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: December 13, 1995

In Reply Refer To: H-95-48

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About 1:50 a.m. on Monday, January 9, 1995, a multiple-vehicle rear-end collision occurred during localized fog at milepost 118 on Interstate 40 near Menifee, Arkansas. The collision sequence initiated when an uninvolved vehicle and the accident lead vehicle entered dense fog. As the lead vehicle reportedly slowed from 65 miles per hour (mph) to between 35 and 40 mph, it was struck in the rear. Subsequent collisions occurred as vehicles drove into the wreckage area at speeds varying from 15 to 60 mph. The accident eventually involved eight loaded truck tractor semitrailer combinations and one light-duty delivery van. Eight vehicles were occupied by a driver only, and one vehicle had a driver and a codriver. Three truckdrivers, the codriver, and the van driver were killed. One truckdriver received a minor injury, and four truckdrivers were not injured.¹

The collision sequence was initiated when an uninvolved cattle transporter and vehicle 1, traveling westbound, together slowed as the two vehicles entered an area of dense fog. Their drivers had been talking on the citizens band (CB) radio and had been warned over the CB by truckdrivers traveling east on I-40 about a dense patch of fog. The driver of vehicle 1 reported that he had slowed from 65 miles per hour (mph) to between 35 and 40 mph. He stated that his vehicle was struck in the rear, damaging the axles and causing the loss of braking. He kept the vehicle straight in the right lane and continued to slow when his vehicle was struck again.

¹For more detailed information, read Highway Accident Report—*Multiple-Vehicle Collision with Fire during Fog near Milepost 118 on Interstate 40, Menifee, Arkansas, on January 9, 1995/Special Investigation of Collision Warning Technology* (NTSB/HAR-95/03).

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The driver of vehicle 2 reported that he slowed from 65 to 60 mph when he heard the CB reports about a patch of fog ahead at the bottom of a hill. He began to slow further when he saw the fog and entered it traveling about 55 mph. Then, he braked harder, slowing to between 40 and 45 mph. He indicated the forward visibility was only 5 feet, but he knew traffic was approaching from behind and was afraid to slow more. Next, he heard someone he thought was the driver of the cattle transporter, which was ahead of vehicle 1, stating on the CB, "I can't see a thing in here." At that time, he came upon vehicle 1 and collided into its left rear. He stated that the vehicle ahead of him was traveling very slowly. Vehicle 2 veered to the left, coming to rest in the center median, after it struck vehicle 1.

After the collision, the driver of vehicle 2 said he jumped from his vehicle and ran toward the vehicle that he had struck to check on its driver. However, he then remembered his truck was still running and returned to shut down its engine. By the time he reached vehicle 1, it had already been struck in the rear by vehicle 3. Then several events occurred nearly simultaneously. The driver of vehicle 2 stood on the steps of vehicle 1 to check on its driver's injuries. At the same time, the driver of vehicle 3 came running up to also check on that driver's injuries, and then vehicle 4 struck the rear of vehicle 3. The driver of vehicle 2 said that he was knocked to the ground by the impact and that he thought vehicle 4 had actually stopped before striking anything, but it was pushed into vehicle 3 by vehicle 5. He added that he was unsure about the time intervals between impacts, but he thought that he was in the fog less than 30 seconds before he struck vehicle 1 and that 30 seconds elapsed between when he was knocked from vehicle 1 and when the fire and explosion behind him occurred.

The driver of vehicle 3 stated that he crested a hill and saw a tractor semitrailer disappearing into heavy fog at the bottom of the hill. As the vehicle ahead of him disappeared into the fog, he saw its brake lights come on, so he reduced his speed to approximately 30 mph. He continued to slow, swerved to the left, and braked when he saw the vehicle ahead of him stopped in the road. He said that the left rear tandem axles of that vehicle had been knocked askew and were partly off of the semitrailer into the left lane. After the impact, he ran back to vehicle 4 behind him to check on his coworker, who had gotten out his truck. They were looking at the damage on the grill of the coworker's truck when vehicle 5 struck or was pushed into the rear of that truck.

The driver of vehicle 4 stated that he and the driver of vehicle 3 had been talking on CB radio channel 21 before coming to the fog patch at the bottom of the hill. He was three to four truck lengths behind the unit that was ahead of him, but he lost sight of its preceding tail lights as soon as they penetrated the fog. He stated that his coworker came on the CB and said, "Man it's foggy in here." The driver of vehicle 4 then slowed to about 25 mph and continued to slow. Moments later he saw that his coworker's truck was stopped, and he struck the rear of it. He estimated that he was only traveling 10 to 15 mph when he collided into the rear of vehicle 3. After the impact, he turned on his flashers and climbed out of his truck, where he met his coworker from vehicle 3. They looked at the damage to his grill, and moments later his truck was struck in the rear by vehicle 5. He was unsure whether vehicle 5 had slid into his truck or was pushed into it by the truck that had struck the rear of vehicle 5.

The driver of vehicle 5 stated that he slowed from 68 to 57 mph when he heard the CB radio reports of fog on the west side of Conway, Arkansas. When he heard more reports of heavy fog and saw the heavy fog at the bottom of the hill, he slowed to 45 mph. He then slowed to between 15 and 20 mph when he had trouble seeing. He stated that when he saw the stopped combination with its flashers on ahead in his lane, he braked and was able to stop approximately 5 feet from the rear of it. Next, he activated his flashers and used his CB to warn the drivers approaching from his rear that vehicles were stopped in the inside lane. Also, he remembered the drivers of two trucks that he had been behind since El Dorado, Arkansas, had been talking on channel 21. He attempted to call them but received no answer. Then, the rear of his vehicle was struck very hard, and after the impact, he unbuckled his seatbelt and climbed down. By the time he reached the pavement, another combination had struck the wreckage of his truck and vehicle 6. Additional collisions and fire, in which the drivers of vehicles 6, 7, 8, and 9 were killed, followed shortly thereafter.

The use of CB radios has increased tremendously over the past 25 years as technology has developed smaller, more powerful, reliable units. Channel 19 has evolved into the common routine communication channel. However, CB radios can be built with many channel selections, which is a useful feature when a driver is traversing urban areas and the airwaves become full. Both westbound and eastbound drivers near the Meniffee accident area were discussing the dense fog through their CB radios. At least two of the accident-involved drivers, however, had their radios set to a channel other than the normally utilized channel 19.

According to trucking industry sources, approximately 97 percent of all heavy trucks traveling interstates are equipped with CB radios. Many truckdrivers routinely use their CB to receive and transmit information concerning hazards that might lay ahead, and channel 19 is primarily used for vehicle-to-vehicle communications. Many emergency services providers also routinely monitor the CB channels, and channel 9 is reserved for emergency communication. On flat land, with the legally permissible 5 watts of power, a range of 5 miles or more is normally expected. Seven of the eight truck tractors in the Meniffee accident were equipped with CB radios.

Trucking industry representatives at the April 1995 National Transportation Safety Board investigative conference Mobile Collision Warning Technology for Low Visibility/Low Awareness Collisions supported enhanced driver communication as an effective means to warn drivers of local fog and other visibility-related issues. However, according to the industry conference speakers, truckdrivers have found that the common CB channel airwaves are often overcrowded, thus reducing the effectiveness of the CB to warn other truckers and motorists of road hazards ahead.

CB channel 9 is routinely monitored by emergency response personnel, roadside service providers, and police agencies. Some CB monitors used by these agencies and providers are equipped with a feature also available to the public that allows channel 9 broadcasts to automatically override any channel that might be set on individual radios. However, no information is available about the number of CB radios currently in operation that have this

feature. When an emergency transmission is sent over the channel 9 frequency, a person listening to another channel communications will automatically receive the emergency broadcast. A Federal Communications Commission (FCC) official indicated that the FCC sees some merit in encouraging a channel 9 override as standard equipment on CB radios to enhance highway safety. Had the drivers in the Menifee collision sequence had the capability to transmit and to receive on a common channel such as 9, they may have possibly been warned of the road blockage. The Safety Board concludes that equipping CB radios with the emergency channel 9 override feature could enhance their contribution to highway safety. Consequently, the Safety Board believes that the Telecommunications Industry Association should encourage its members to include an emergency channel 9 override as a standard feature on all models of CB radios.

Therefore, the National Transportation Safety Board recommends that the Telecommunications Industry Association:

Encourage your members to include an emergency channel 9 override as a standard feature on all models of citizens band radios. (Class II, Priority Action)
(H-95-48)

Also, the Safety Board issued Safety Recommendations H-95-44 to the U.S. Department of Transportation; H-95-45 to the National Highway Traffic Safety Administration; H-95-46 to the Federal Communications Commission; H-95-47 to the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, and the Territories; H-95-49 to the Intelligent Transportation Society of America; and H-95-50 to the American Association of Motor Vehicle Administrators.

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 action taken as a result of its safety recommendations. Therefore, it 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-95-48 in your reply. If you need additional information, you may call (202) 382-6850.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT and GOGLIA concurred in this recommendation.

By: 
Chairman