

**Testimony of the Honorable Deborah A.P. Hersman  
Chairman  
National Transportation Safety Board  
Before the  
U.S. Senate  
Committee on Commerce, Science, and Transportation  
Subcommittee on Surface Transportation and Merchant Marine  
Infrastructure, Safety, and Security  
Hearing on  
Oversight of Motor Carrier Safety Efforts  
April 28, 2010**

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Good morning, Chairman Lautenberg and Members of the Subcommittee. Thank you for the opportunity to appear before you today on behalf of the National Transportation Safety Board (NTSB) regarding oversight of motor carrier safety. I am privileged to represent the men and women of the NTSB, who work tirelessly to improve the safety of the traveling public. As you know, the NTSB is charged with investigating major transportation accidents, including highway accidents, determining their probable cause, and making recommendations to prevent similar accidents from happening again. We frequently recommend changes in highway or vehicle design, driver training, occupant protection, and regulatory oversight.

Every day, there are thousands of accidents on our nation's highways, resulting in tens of thousands of fatalities each year. Historically, accidents involving large trucks comprise approximately 10 percent of the fatalities on our highways.

Today, I will highlight some specific issues of concern regarding the safety of trucks and buses.

***Motor Carrier Safety Oversight***

No carrier wants to have an accident, but strong economic forces sometimes create an environment in which safety is not always every carrier's priority. That is why we need comprehensive and consistent oversight of the motor carrier industry.

The two most important factors related to safe motor carrier operations are the condition of the vehicles and the performance of the drivers. Current rules prevent the Federal Motor Carrier Safety Administration (FMCSA) from putting carriers out of service with an unsatisfactory rating in only one of the 6 rated factors. They must be unsatisfactory in 2 factors. In other words, they could be unsatisfactory in either the vehicle or driver areas and still be allowed to operate. The NTSB believes that an unsatisfactory in *either* category should be sufficient cause to place a carrier out of service. We have been asking the FMCSA to fix this deficiency since 1999.

The NTSB raised this deficiency as the result of our investigation of an accident involving a motorcoach that had only 50-percent braking efficiency. The motorcoach rolled over in Indianapolis, Indiana, killing 2 passengers and injuring 13. A postaccident compliance review of the motor carrier by the FMCSA resulted in 10 out of 10 vehicles being placed out of service. Clearly, the motor carrier had some issues with its vehicle maintenance prior to the accident. It had been inspected nine times between 1987 and 1995. In 1994, even though 63 percent of the vehicles met the out-of-service criteria, the carrier received a “conditional” rating for the vehicle factors and, because all the other factors were rated “satisfactory,” it was given an overall rating of “satisfactory.” Thus, with the blessing of the FMCSA, the carrier was able to continue to operate with unsafe vehicles.

The NTSB recommended that the FMCSA do something relatively simple: change the safety fitness rating methodology so that adverse vehicle- or driver performance-based data alone would be sufficient to result in an overall “unsatisfactory” rating for a carrier.<sup>1</sup> To date, the FMCSA has not acted on this recommendation. As a result, the NTSB added this recommendation to our Most Wanted List of Transportation Safety Improvements in 2000.

Two years after the Indianapolis accident, a truck with poorly maintained brakes collided with a school bus near Mountainburg, Arkansas, killing three students. Our investigation found that, prior to the accident, the FMCSA considered the motor carrier “satisfactory” but postaccident, it was rated “conditional” overall. The motor carrier profile report showed it had had 29 roadside inspections in the previous 12 months, which resulted in 4 out-of-service vehicles (14 percent), all with out-of-adjustment brakes. In the NTSB’s view, 14 percent of a fleet with bad brakes should not be considered “satisfactory.” As a result, the NTSB reiterated our 1999 recommendation.

The Board revisited this recommendation to the FMCSA in a number of subsequent accidents:

- In 2002, a five-fatality motorcoach rollover accident occurred near Victor, New York, involving a carrier that had received a favorable compliance review rating despite a long and consistent history of driver- and vehicle-related violations.
- In 2004, a fatigued tractor-trailer driver ran into a stopped queue of traffic in a construction zone near Chelsea, Michigan. A postaccident compliance review by the FMCSA revealed a 20-percent falsification rate of drivers’ logs, yet the FMCSA allowed the motor carrier to continue to operate with a “conditional” rating.
- In 2005, 23 elderly passengers died in a motorcoach fire near Dallas, Texas, caused by the motor carrier’s poor maintenance of the vehicle’s wheel bearings. The Texas Department of Public Safety (DPS) and the FMCSA both identified numerous driver and vehicle safety violations prior to the accident, but they did not shut the carrier down. The FMCSA gave the carrier a “satisfactory” rating. At the time, the Texas DPS had no authority to force the motor carrier to cease operations. (They do now.) As a result, the NTSB not only reiterated the 1999 recommendation, our report cited the FMCSA’s

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<sup>1</sup> Safety Recommendation H-99-6.

ineffective compliance review system as contributing to the probable cause of the accident.

- In 2007, seven passengers died in a motorcoach accident involving Bluffton University students in Atlanta, Georgia. A postaccident compliance review by the FMCSA rated the carrier “satisfactory.” However, the NTSB’s investigation found that the driver failed to properly record hours-of-service information for the trip and that the motor carrier had numerous earlier driver-related violations.

Just last year, the NTSB completed its investigation of a 2008 motorcoach rollover accident near Victoria, Texas. Again, we found that the FMCSA safety rating methodology did not provide adequate oversight of the motor carrier and its leasing partners. The NTSB reclassified the 1999 recommendation as “unacceptable” because we believe the FMCSA has not made the necessary changes to take problem carriers off the road.

### ***CSA 2010***

To address its oversight shortfalls, the FMCSA has initiated a complex set of programs called the “Comprehensive Safety Analysis 2010,” or “CSA 2010.” CSA 2010 is based on the development of new performance-based systems for determining motor carrier and driver safety. These changes are long overdue. However, we are concerned whether the final implementation of CSA 2010 will make the changes necessary to take problem motor carriers off the road.

The FMCSA should have made incremental changes to its compliance review process while developing more sweeping changes to its oversight program through CSA 2010 or some other means. In fact, we issued a recommendation to that effect in 2007.<sup>2</sup> The FMCSA’s current efforts represent a comprehensive review of the process of determining the safety of commercial motor carriers, and the agency should be commended for that effort. However, CSA 2010 is an ambitious program with milestones that will be difficult to meet. In fact, just this month, the FMCSA announced that the start of CSA 2010 will be delayed, with some portions postponed until 2011. In the meantime, motor carriers continue to operate with poor management of their drivers and vehicles, which will lead to more accidents.

### ***Hours of Service***

The NTSB’s interest in the fatigue of commercial drivers goes back more than 30 years. In the 1990s, the NTSB conducted two safety studies<sup>3</sup> that found that fatigue was the most frequently cited probable cause or factor in crashes with driver fatalities. The studies also found that the most important factors influencing fatigue-related crashes were the amount of sleep a

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<sup>2</sup> Safety Recommendation H-07-3: “To protect the traveling public until completion of the Comprehensive Safety Analysis 2010 Initiative, immediately issue an Interim Rule to include all Federal Motor Carrier Safety regulations in the current compliance review process so that all violations of regulations are reflected in the calculation of a carrier’s final rating.”

<sup>3</sup> (a) *Fatigue, Alcohol, Drugs, and Medical Factors in Fatal-to-the-Driver Heavy Truck Crashes*, Safety Study NTSB/SS-90/01 (Washington, DC: NTSB, 1990); (b) *Factors that Affect Fatigue in Heavy Truck Accidents*, Safety Study NTSB/SS-95-01 (Washington, DC: NTSB, 1995).

driver received and whether the driver was engaging in “split-sleeps” (that is, multiple short sleep episodes rather than one continuous 8-hour period).

Based on these studies, the NTSB recommended that the FMCSA use science-based principles to revise the hours-of-service rule, ensure that the rule would enable drivers to obtain at least 8 hours of continuous sleep, and eliminate sleeper berth provisions that allow for the splitting of sleep periods. In September 2005, the FMCSA issued a final rule with a provision that drivers using a sleeper berth must take at least 8 consecutive hours in the sleeper berth, plus 2 consecutive hours either in the sleeper berth, off duty, or in any combination thereof.

### **Recent Investigations of Accidents Involving Fatigue**

1997	Slinger, WI	(8-fatality passenger van/tractor-trailer collision; fatigued truck driver)
2000	Jackson, TN	(1-fatality tractor-trailer collision with parked state police vehicle; fatigued truck driver)
2004	Sulphur Springs, TX	(5-fatality multivehicle collisions during road closure; fatigued truck driver)
2004	Chelsea, MI	(1-fatality tractor-trailer collision in work zone; fatigued truck driver)
2004	Turrell, AR	(15-fatality motorcoach rollover accident; fatigued motorcoach driver)
2005	Lake Butler, FL	(7-fatality tractor-trailer/sedan/school bus collision; fatigued driver)
2005	Osseo, WI	(5-fatality motorcoach collision with overturned tractor-trailer; fatigued truck driver)
2008	Victoria, TX	(1-fatality motorcoach rollover accident; fatigued motorcoach driver)
2008	Mexican Hat, UT	(9-fatality motorcoach rollover accident; fatigued motorcoach driver)

In September 2008, following completion of investigations into fatigue-related accidents that occurred in Osseo, Wisconsin; Lake Butler, Florida; and Turrell, Arkansas; the NTSB asked the FMCSA to develop a plan to deploy technologies in commercial vehicles to reduce fatigue-related accidents,<sup>4</sup> and to develop a methodology to assess the effectiveness of the fatigue management plans implemented by motor carriers.<sup>5</sup> The 2008 motorcoach accident in Victoria, Texas, again demonstrated the serious nature of fatigue-related accidents and the need for both in-vehicle technologies and effective fatigue management programs. Upon completion of its investigation of this accident, the NTSB urged the FMCSA to continue to work on these recommendations.

Citing many of the accidents mentioned above and several others from other modes of transportation in which drivers, pilots, and train engineers had undiagnosed obstructive sleep

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<sup>4</sup> Safety Recommendation H-08-13.

<sup>5</sup> Safety Recommendation H-08-14.

apnea, in October 2009, the Board issued recommendations on obstructive sleep apnea to the FMCSA. In particular, we recommended that the FMCSA: (1) require drivers with a high risk for obstructive sleep apnea to obtain medical certification that they have been appropriately evaluated and, if necessary, effectively treated for that disorder,<sup>6</sup> and (2) provide guidance for commercial drivers, employers, and physicians about identifying and treating individuals at high risk of obstructive sleep apnea.<sup>7</sup>

### ***Electronic On-Board Recorders for Hours of Service***

No hours-of-service rule is adequate unless it is enforceable. In our investigations, the NTSB has repeatedly found that some drivers falsify their paper logbooks or keep two sets of books, and some motor carriers do not closely monitor their drivers' compliance with the rules. To address these problems, since 1977, the NTSB has advocated the use of electronic on-board recorders (EOBRs) to allow better monitoring of hours of service and driver fatigue.

In 2007, the NTSB asked the FMCSA to require EOBRs for hours-of-service monitoring for all interstate commercial carriers following our investigation of an accident in Chelsea, Michigan. Also in that year, the FMCSA issued a proposed rulemaking for on-board recorders. However, the rule mostly promotes voluntary installation of EOBRs, and it only requires installation for carriers with serious patterns of hours-of-service violations. The NTSB is concerned that the FMCSA and law enforcement authorities will have a difficult time identifying such pattern violators without this technology. We are convinced that the only way on-board recorders can help stem hours-of-service violations is if they are mandated for use by all operators. Therefore, in 2008, the NTSB added EOBRs to its Most Wanted List.

EOBRs have the potential to efficiently and accurately collect and verify the hours of service of all commercial drivers. A universal and mandatory requirement for EOBRs will create a level playing field for compliance with hours-of-service rules that will ultimately make our highways safer for all drivers.

### ***New Entrant Motor Carriers***

In 2002, the Board investigated an accident involving a tractor-semitrailer collision with a Greyhound bus in Loraine, Texas, which resulted in three deaths. At the time, the FMCSA had essentially no review or follow-up of new entrant motor carriers. To become a motor carrier, the owner of a trucking company merely had to fill out an online form and pay a small fee to receive operating authority from the FMCSA. In this case, our investigation revealed that when the trucking company owner submitted his application, he lied about his knowledge of the regulations, about having systems in place to comply with the regulations, and about a drug conviction for possession of large amounts of marijuana the year prior to his application. He also did not maintain any records on his drivers or vehicles, did not have a drug and alcohol program, and did not conduct background checks of his drivers. Further, he knowingly dispatched the accident driver, who did not have a commercial driver's license or medical certificate.

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<sup>6</sup> Safety Recommendation H-09-15.

<sup>7</sup> Safety Recommendation H-09-16.

The NTSB recommended that the FMCSA require new motor carriers to demonstrate their safety fitness prior to obtaining new entrant operating authority.<sup>8</sup> In response to this recommendation, the FMCSA developed the New Applicant Screening Program under which a new motor carrier operating in interstate commerce is subject to an 18-month safety monitoring period and receives a safety audit sometime after its first 3 months of operation but before it completes 18 months of operation.

In 2008, the FMCSA began its New Entrant Safety Assurance Program, under which the agency identified 16 regulations that are essential elements of basic safety management controls necessary to operate in interstate commerce and made a carrier's failure to comply with any of the 16 regulations an automatic failure of the safety audit. Additionally, if certain violations are discovered during a roadside inspection, the new entrant is subject to expedited actions to correct these deficiencies.

Unfortunately, unscrupulous motor carriers use the new entrant program to evade an enforcement action or an out-of-service order by going out of business and then reincarnating themselves, as if they are a brand new motor carrier. The NTSB found that this had occurred with a motor carrier involved in an accident in 2008, when a motorcoach ran off a bridge and rolled over in Sherman, Texas, killing 17 passengers. After losing its authority to operate because of an unsatisfactory compliance review rating, the motor carrier applied for operating authority under a new name as a new entrant. The NTSB concluded that the FMCSA processes were inadequate to identify the carrier as a company that was simply evading enforcement action. The NTSB issued a recommendation to the FMCSA to evaluate the effectiveness of its New Applicant Screening Program.<sup>9</sup>

The NTSB found additional deficiencies with the FMCSA's new entrant program during its investigation of a 2008 accident in which the driver fell asleep and the motorcoach overturned in Victoria, Texas, killing one person. The FMCSA failed to notice that the accident carrier reincarnated into a new carrier shortly after the accident. As a result, the NTSB issued three recommendations to the FMCSA that ask the agency to develop methods to identify reincarnated carriers and seek authority to deny or revoke their operating authority.<sup>10</sup>

### ***Medically Unqualified Commercial Drivers***

The NTSB has investigated many accidents involving commercial drivers with serious preexisting medical conditions that had not been adequately evaluated. A driver's medical conditions are not always causal to an accident, but finding these undocumented and unevaluated conditions in commercial drivers is of significant concern to the NTSB. The most tragic example of this issue was the 1999 Mother's Day motorcoach accident in New Orleans, Louisiana, in which a motorcoach driver lost consciousness while driving on an interstate highway, left the roadway, and crashed into an embankment, killing 22 passengers and injuring 21. The driver had

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<sup>8</sup> Safety Recommendation H-03-2.

<sup>9</sup> Safety Recommendation H-09-21.

<sup>10</sup> Safety Recommendations H-09-34 through -36.

multiple known serious medical conditions, including kidney failure and congestive heart failure, and was receiving intravenous therapy for 3-4 hours a day, 6 days a week.

The Board recommended that the FMCSA develop a comprehensive medical oversight program to address the need to:

- Ensure that examiners are qualified and know what to look for;
- Track all medical certificate applications;
- Enhance oversight and enforcement of invalid certificates; and
- Provide mechanisms for reporting medical conditions.<sup>11</sup>

The NTSB specified the development of a comprehensive and systematic oversight program, because a piecemeal approach to the problem may result in deficiencies that will continue to permit unqualified drivers to operate on the nation's highways. Because of its critical importance and the lack of substantive progress by the FMCSA on the recommendations, this issue was placed on our Most Wanted List in 2003.

In response, the FMCSA took two important steps. In November 2008, the FMCSA proposed a rule that would require all medical examiners who conduct medical examinations of interstate commercial motor vehicle drivers to complete training on physical qualification standards, pass a test to verify an understanding of those standards, and maintain competence by periodic training and testing. If adopted, the rule will help ensure that the medical examiners are properly qualified to evaluate the fitness of commercial drivers. In addition, the FMCSA has hired its first medical officer, a physician with occupational medical experience, to provide the necessary expertise to guide its efforts in establishing a comprehensive medical oversight system.

In December 2008, the FMCSA issued a final rule requiring interstate commercial drivers to provide a current original or copy of their medical examiner's certificate to their state drivers' licensing agency. This rule is an important improvement because law enforcement officials at the roadside will be able to determine whether a driver possesses a current medical certificate and will be able to take appropriate action if the driver does not. The NTSB thus was able to close two of its eight recommendations on this issue in "acceptable" status.<sup>12</sup>

We are encouraged by the FMCSA's hiring of a medical officer, because it indicates that the FMCSA appreciates the importance of this issue to improving highway safety. I have personally met with the FMCSA Medical Officer, who has an excellent background to deal with these issues, and I think this step represents substantial progress.

Although the FMCSA continues to work to address medical issues, much remains to be done. For example, the national registry of certified medical examiners should include a tracking mechanism for driver medical examinations. This step would reduce the current practice of drivers "doctor shopping" to find one who will sign their medical forms. Likewise, the FMCSA's medical oversight program should establish a mechanism to review medical certificates, beyond

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<sup>11</sup> Safety Recommendations H-01-17 through -24.

<sup>12</sup> Safety Recommendations H-01-22 and -23.

the examiner evaluating the driver, to identify and correct the inappropriate issuance of medical certification. Finally, the FMCSA has taken no action to establish a system for reporting medical conditions that develop between examinations.

### *Cell Phone Use*

Driver distraction may be one of the least understood causes of traffic accidents. Recent interest in the effect of cell phone use and the use of other personal electronic devices while driving has prompted numerous studies. The explosive growth of text-messaging while driving has prompted several states and the Federal Government to restrict such activity.

Most would agree that texting while driving is unsafe. In fact, Virginia Tech has shown that texting increases the risk of an accident by 23 times. However, the problem is much bigger than texting. If you dial a phone number or reach for the phone while you are driving, you are taking your eyes off the road. You may be able to do this and get away with it hundreds or even thousands of times, but one day, you will look down at your cell phone at just the wrong moment and become an accident statistic. When the driver of an 80,000-pound tractor-trailer or a motorcoach carrying 55 passengers looks away from the road at the wrong instant, the results can be catastrophic.

The NTSB investigated a passenger car accident in February 2002 in Largo, Maryland, in which an inexperienced 20-year-old driver lost control of her high-profile, short-wheelbase vehicle on the Capitol Beltway. She was talking to her boyfriend, who was speeding in another vehicle ahead of her. She lost control of her vehicle and crossed over the median, striking a minivan and killing all four of its occupants and herself. The cause of the accident was a combination of inexperience, unfamiliarity with the vehicle, speed, and distraction caused by use of a handheld wireless telephone. As a result, the NTSB recommended that the applicable states prohibit holders of learner's permits and intermediate licenses from using wireless communication devices while driving, and that they add driver distraction codes to traffic accident investigation forms.<sup>13</sup>

In 2004, we investigated an accident in Alexandria, Virginia, in which an experienced motorcoach driver, who was having a heated conversation on his hands-free cell phone, failed to move to the center lane and struck the underside of an arched stone bridge on the George Washington Parkway. Our investigation found that the driver had numerous cues to change lanes at the appropriate time. In fact, the driver was familiar with the road and was following another bus that had moved to the center lane. Yet, this driver did not notice the well-marked signage as he approached the arched stone bridge. The accident was clearly caused by this driver's cognitive distraction, due to his conversation on his cell phone. The NTSB recommended that the FMCSA and the 50 states enact laws to prohibit cell phone use by commercial drivers while driving a passenger-carrying commercial vehicle or school bus.<sup>14</sup> We also recommended that

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<sup>13</sup> Safety Recommendations H-03-8 and -9.

<sup>14</sup> Safety Recommendations H-06-27 and -28.



motorcoach associations, school bus organizations, and unions develop formal policies to prohibit cell phone use by commercial drivers, except in emergencies.<sup>15</sup>

Last fall, we participated in the U.S. Department of Transportation's (DOT) Distracted Driving Summit, which addressed the dangers of text-messaging and other driving distractions. During the summit, Secretary LaHood announced a plan to initiate rulemaking that would consider banning texting altogether and would restrict the use of cellular telephones by truck and interstate bus operators. A notice of proposed rulemaking was issued this month. While a ban on texting is definitely a step in the right safety direction, it does not satisfy our recommendation to prohibit the use of cellular telephones by drivers of passenger-carrying motorcoaches or school buses. The NTSB believes that cell phone use can be just as dangerous as text-messaging, because it is a cognitive distraction for the driver.

### ***Motorcoach Passenger Protection***

Progress in the area of improving the protection for motorcoach passengers has been disappointing. We continue to investigate motorcoach accidents in which passengers are thrown from their seats, striking hard objects within the vehicle, and in which they are ejected out the windows. In 1999, we recommended that the National Highway Traffic Safety Administration (NHTSA) develop performance standards for motorcoach occupant protection systems and require newly manufactured motorcoaches to have such systems.<sup>16</sup>

In the 11 years since we issued these recommendations, we have investigated more than 30 motorcoach accidents that have caused 140 fatalities and 1,070 injuries.<sup>17</sup> These accidents have included 259 ejections. NHTSA has not established any meaningful occupant protection standards for motorcoaches, and last year, the NTSB identified NHTSA's lack of action in this area as contributing to the probable cause of the nine-fatality motorcoach accident in Mexican Hat, Utah. Shortly thereafter, Secretary LaHood directed several of the modal administrations within DOT, including the FMCSA, NHTSA, the Federal Highway Administration (FHWA), the Research and Innovative Technology Administration (RITA), and the Pipeline and Hazardous Materials Safety Administration (PHMSA), to develop a Motorcoach Safety Action Plan. The NTSB is hopeful that this initiative will lead to meaningful improvements in the safety protections provided to motorcoach passengers.

### ***Motorcoach Roof Strength***

Structural integrity of a motorcoach is as important to the safety of passengers as occupant protection systems. The NTSB has recommended that NHTSA develop performance

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<sup>15</sup> Safety Recommendation H-06-29.

<sup>16</sup> Recommendations H-99-47 and -48.

<sup>17</sup> Some of the major investigations include the following accidents: 1999 New Orleans, LA (22 fatal, 21 injured, 10 ejected); 2002 Loraine, TX (3 fatal, 29 injured); 2002 Victor, NY (5 fatal, 41 injured, 6 ejected); 2003 Hewitt, TX (5 fatal, 29 injured, 15 ejected); 2003 Tallulah, LA (8 fatal, 6 injured, 1 ejected); 2004 Turrell, AR (15 fatal, 15 injured, 30 ejected); 2005 Osseo, WI (5 fatal, 35 injured, 1 ejected); 2007 Atlanta, GA (6 fatal, 28 injured, 12 ejected); 2008 Victoria, TX (1 fatal, 46 injured, 1 ejected); 2008 Mexican Hat, UT (9 fatal, 42 injured, 50 ejected); and 2008 Sherman, TX (17 fatal, 39 injured, 4 ejected).

standards for motorcoach roof strength that provide maximum survival space for all seating positions and that take into account current typical motorcoach window dimensions.<sup>18</sup> We have also recommended that NHTSA revise window glazing requirements for newly manufactured motorcoaches.<sup>19</sup> The roof strength recommendations were added to the NTSB's Most Wanted List in 2000. Because of inaction by NHTSA on improving roof strength and window glazing, the NTSB reclassified all of these recommendations as "unacceptable response" in 2009.

### ***Motorcoach Passenger Egress***

Most motorcoaches in the United States have emergency egress windows. However, in a 1999 study on *Selective Motorcoach Issues*, the NTSB found that passengers had difficulty in opening emergency windows and keeping them open during evacuations. Consequently, in 1999, we recommended that NHTSA require window exits and other emergency exits not at floor level to be designed so that they are easy to open and to keep open during an emergency evacuation, when a motorcoach is either upright or at unusual attitudes.<sup>20</sup> This recommendation is on our Most Wanted List.

### ***Motorcoach Fire Protection***

Although injuries or fatalities resulting from motorcoach fires are relatively uncommon, fires on motorcoaches are very common (about one motorcoach is lost to fire per day). The importance of fire detection and suppression came to the forefront of everyone's attention when 22 elderly motorcoach passengers perished near Dallas, Texas, in 2005 during the evacuation from Hurricane Rita. As a result of that investigation, the NTSB asked NHTSA to evaluate current emergency evacuation designs of motorcoaches and buses.<sup>21</sup> The evaluation should take into account acceptable egress times for various postaccident environments, unavailable exit situations, and the current aboveground height and design of window exits to be used in emergencies by all potential vehicle occupants. The NTSB also asked NHTSA to develop early warning detection systems to monitor the temperature of wheel well compartments in motorcoaches and buses, and to evaluate the need for a Federal Motor Vehicle Safety Standard to require fire detection and suppression systems on motorcoaches.<sup>22</sup>

### ***Event Data Recorders***

Event data recorders are a proven technology. They record critical vehicle movements and driver inputs. Such information greatly helps in accident reconstruction, leading to better accident prevention initiatives. Since 1997, the NTSB has issued six recommendations and participated in or hosted five public forums on the use of data recording devices in highway transportation.

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<sup>18</sup> Safety Recommendations H-99-50 and -51.

<sup>19</sup> Safety Recommendation H-99-49.

<sup>20</sup> Safety Recommendation H-99-9.

<sup>21</sup> Safety Recommendation H-07-8.

<sup>22</sup> Safety Recommendations H-07-6 and -7.

Following the 2003 pedal misapplication accident in a Santa Monica, California, farmers' market, which resulted in 10 fatalities and 63 injuries, we recommended that NHTSA make event data recorders mandatory on newly manufactured light-duty vehicles.<sup>23</sup> Most manufacturers now provide these devices.

Specific to school buses and motorcoaches, the NTSB recommended in 1999 that NHTSA require school buses and motorcoaches manufactured after January 1, 2003, to be equipped with on-board recording systems that record a number of vehicle parameters.<sup>24</sup> We reiterated the recommendations in 2008, following the seven-fatality motorcoach accident involving Bluffton University students in Atlanta, Georgia.

### ***New Crash Avoidance Technologies***

Since 1995, the NTSB has advocated collision warning systems and adaptive cruise control to prevent accidents. In 2001, as part of a study on *Technology for the Prevention of Rear-End Collisions*, the NTSB investigated nine commercial vehicle rear-end collisions in which 20 people died and 181 were injured. Common to all nine accidents was the degraded perception of traffic conditions ahead by the driver in the rear. The NTSB recommended that NHTSA issue performance standards for adaptive cruise control and collision warning systems for new commercial vehicles.<sup>25</sup>

In 2003, the NTSB investigated a multivehicle accident near Hampshire, Illinois, in which a tractor-trailer failed to slow for the stopped or slow-moving traffic on the approach to the Interstate 90 toll plaza. The tractor-trailer driver was distracted and the tractor-trailer struck the rear of a specialty bus, killing 8 passengers and injuring 12. As a result, the Board reiterated the above recommendations. In 2007, these important safety recommendations were added to our Most Wanted List. They were reiterated in 2008, in the NTSB's report on a five-fatality motorcoach and tractor-trailer accident in Osseo, Wisconsin, as well as a seven-fatality tractor-trailer/sedan/school bus collision in Lake Butler, Florida, and a 15-fatality motorcoach rollover accident in Turrell, Arkansas.

Electronic stability control is standard in most automobiles today. As a result of the Osseo accident investigation, the NTSB recommended that NHTSA determine whether equipping commercial vehicles with collision warning systems with active braking and electronic stability control systems would reduce commercial vehicle accidents, and if so, require their use on commercial vehicles.<sup>26</sup>

In many commercial vehicle tires, a small loss of air can degrade tire carrying capacity and cause sufficient heat build-up to result in tire failure. In 2008, a motorcoach became uncontrollable after a tire failure and plunged off a bridge near Sherman, Texas, resulting in 17 fatalities. NHTSA now requires the installation of tire pressure monitoring systems on passenger

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<sup>23</sup> Safety Recommendation H-04-26.

<sup>24</sup> Safety Recommendations H-99-53 and -54.

<sup>25</sup> Safety Recommendations H-01-6 and -7.

<sup>26</sup> Safety Recommendation H-08-15.

cars and light trucks weighing 10,000 pounds or less. As a result of the Sherman accident, the NTSB recommended that all commercial vehicles weighing over 10,000 pounds be equipped with tire pressure monitoring systems,<sup>27</sup> to help avoid crashes caused by tire failures.

### **Closing**

Many of the issues discussed today have been around for decades, and much is left to be done to improve highway safety. Immediate action is needed so that when we load our children into our cars and get out on the highway, we are surrounded by trucks and buses that are safely designed, carefully maintained, and expertly operated.

Mr. Chairman, this completes my statement, and I will be happy to respond to any questions you may have.

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<sup>27</sup> Safety Recommendation H-09-22.