INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

March 27, 2007

The Honorable Nicole R. Nason
Administrator
National Highway Traffic Safety Administration
400 Seventh Street, SW
Washington, DC 20590

The Honorable John H. Hill
Administrator
Federal Motor Carrier Safety Administration
400 Seventh Street, SW
Washington, DC 20590

Motor Vehicle and Carrier Safety Standards; Devices to Limit the Speed of Certain Trucks
Request for Comments; Docket No. NHTSA-2007-26851

Dear Ms. Nason and Mr. Hill:

The Insurance Institute for Highway Safety (IIHS) urges the National Highway Traffic Safety Administration (NHTSA) and Federal Motor Carrier Safety Administration (FMCSA) to grant the two petitions seeking a rule to require a device on large trucks (gross vehicle weight rating exceeding 26,000 pounds) that would limit their maximum speeds to 68 mph and prohibit owners and operators from adjusting the devices. IIHS urges both agencies to expedite this rulemaking.

Speed is an important factor in crashes involving large trucks, and many large trucks currently travel at very high speeds. Capping large truck speeds is a sensible measure that will reduce the number of large truck crashes and the associated injuries and deaths. Although a cap below 68 mph would be safer, limiting truck speeds to 68 mph would enhance safety compared with the current situation. The European Union, Australia, and Japan already require large trucks to have speed governors. In the United States, many truck fleets voluntarily use speed governors. According to the American Trucking Associations, all new trucks affected by its petition already have an electronic control module (ECM) installed as a standard feature, and the ECM can be set to limit a vehicle's speed. Requiring their use on large trucks will have significant safety benefits. In addition, this measure enjoys a high level of public support.

Background

Large truck travel is vital to the US economy but imposes substantial harm on the nation's highways. Per unit of travel, large trucks are involved in more fatal crashes than passenger vehicles — 2.1 compared with 1.7 crashes per 100 million miles traveled in 2005. The higher fatal involvement rate for large trucks occurs although a much higher proportion of truck miles are traveled on interstate highways, which are the safest roads.

The main problem is the vulnerability of people traveling in smaller vehicles. Trucks often weigh 20-30 times as much as cars. In 2005 5,027 people died in large truck crashes; this represented 1 in 8 traffic fatalities. Most deaths — 71 percent — were passenger vehicle occupants. An additional 12 percent were pedestrians, bicyclists, and motorcyclists. Truck occupants accounted for 15 percent of people killed in large truck crashes. Because of the mismatch between large trucks and passenger vehicles, 97 percent of vehicle occupants killed in two-vehicle crashes involving a passenger vehicle and large truck were occupants of the passenger vehicle.

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The role of speed in crashes

High travel speeds increase crash risk by increasing the frequency and severity of crashes (Elvik, 2005). Because crash energy increases by the square of vehicle speed, when impact speed increases from 40 to 50 mph (a 25 percent increase) the energy that needs to be managed increases by 56 percent.

Speed also increases the risk of crashing because it increases the distance a vehicle travels from the time a driver detects an emergency to the time the driver reacts as well as the distance needed to stop once an emergency is perceived. The inherent dangers in the size and weight differences between large trucks and passenger vehicles are exacerbated by the wide disparities in their stopping distances. The current federally required stopping distance for passenger vehicles (gross vehicle weight rating of 7,716 pounds (3,500 kg)) is 230 feet from 60 mph (Federal Motor Vehicle Safety Standard (FMVSS) 135). Actual stopping distances for most passenger vehicles are much shorter, typically 125-150 feet (Hachett Filipacchi Media, 2006). In contrast, the required stopping distance for fully loaded air-braked truck tractors is 355 feet from 60 mph (FMVSS 121). Actual stopping distances average 298 feet according to the Preliminary Regulatory Impact Analysis (NHTSA, 2005). A large truck traveling at 75 mph requires approximately one-third longer to stop compared with one traveling at 65 mph.

Crash databases lack reliable and complete data on the contribution of speed in crashes, so only estimates can be derived. Based on data from the Fatality Analysis Reporting System (FARS), in 2005 an estimated 328 fatal crashes involved drivers of large trucks who were speeding. These crashes resulted in 374 deaths. About 24 percent of drivers of large trucks involved in fatal crashes in 2005 had at least one speeding conviction within the past 3 years; this compares with 19 percent of passenger vehicle drivers involved in fatal crashes. Speeding by truck drivers was an important factor in the sample of crashes that was the basis of the Large Truck Crash Causation Study (FMCSA, 2006). In this study, traveling too fast for conditions was an associated crash factor in 23 percent of all of the crash-involved truck drivers and 15 percent of the truck drivers involved in two-vehicle crashes.

Numerous studies have established that increases in travel speeds are associated with increased fatalities and fatality rates (e.g., Baum et al., 1989; Baum et al., 1991; NHTSA and Federal Highway Administration, 1998). Restricting large trucks from traveling at very high speeds will result in fewer crashes and fewer injuries and deaths.

Many large trucks travel at high speeds

In response to a 1988 Congressional directive to NHTSA to consider requiring speed control devices on commercial vehicles, NHTSA (1991) concluded that the potential crash reductions from truck speed limiters were not sufficient to justify mandating them. The report noted that speed limiters have little effect on speeds or crash likelihood below the set maximum speed, that the vast majority of truck crashes occur on roadways with speed limits of 65 mph or lower, and that police indicate very few truck crashes occur at estimated truck speeds in excess of 70 mph.

These conclusions are no longer valid due to widespread increases in speed limits and travel speeds after the repeal of the national maximum speed limit in 1995. Prior to repeal, maximum speed limits were 65 mph on rural interstate highways and 55 mph on urban interstates. As of December 2006, 31 states had raised speed limits to 70 mph or higher on some portions of their roadway systems (IIHS, 2007). IIHS research found significantly higher traffic speeds among passenger vehicles and large trucks following repeal of the national maximum speed limit (Retting and Greene, 1997).

In 2006 IIHS monitored speeds of large trucks on segments of rural interstates in 3 states (Appendix A, Table A-1). On rural interstates in Nevada and New Mexico, where the speed limit for large trucks is 75 mph, more than half of the trucks were traveling faster than 68 mph; the proportion traveling faster than 75 mph was 10 percent in New Mexico and 14 percent in Nevada. Truck speeds were lower in Montana, where the speed limit for trucks is 65 mph.

There are indications that truck speeds on rural highways have increased. On New Mexico rural interstates, where IIHS has monitored traffic speeds for 20 years, the proportion of tractor-trailers exceeding 70 mph in 1991 (the same year as the NHTSA Report to Congress) was 16 percent. The speed limit in 1991 was 65 mph. Shortly after the speed limit was increased to 75 mph in 1996, the proportion of tractor-trailers exceeding 70 mph jumped to 38 percent. In the most recent set of speed measurements collected in 2006, with 75 mph speed limits still in place, about half of all tractor-trailers were exceeding 70 mph. Similar trends were observed in the proportion of tractor-trailers exceeding 75 mph (Appendix A, Table A-2).

Truck speeds also increased substantially in Nevada between 1996 and 2006 (Appendix A, Table A-2). For example, the proportion of trucks traveling faster than 70 mph increased from 27 to 43 percent. In Montana truck speeds on rural interstates were much higher in 1996 than in 2006. However, in 1996 the state had no maximum speed limit for passenger vehicles on rural interstates, which promoted high travel speeds.

Speed limiters: a reasonable and sensible measure

Speed governors would provide a more consistent and certain way to maintain lower truck speeds than traditional enforcement approaches. Publicized police enforcement can reduce travel speeds and crashes (Stuster, 1995). However, many enforcement agencies do not have sufficient resources to mount effective speed enforcement programs. In many other countries speed cameras have been highly effective in reducing speeds and speed-related crashes (Cameron et al., 1992; Elvik, 1997; Insurance Corporation of British Columbia, 1998). However, speed cameras have not been widely adopted in the United States as a means to supplement traditional traffic enforcement. Even when traffic laws are enforced, unscrupulous trucking companies and drivers may view fines as a cost of doing business, as stated by US Department of Transportation (2005) Inspector General Mead. Public education campaigns alone have not been effective in reducing speeding. In light of the limitations of police traffic enforcement, speed limiters provide a feasible, cost-effective means to maintain safer speeds among large trucks.

Widespread voluntary use of speed limiters by many trucks fleets (Johnson and Pawar, 2005) attests to the relatively benign effects of speed limiters on reasonable operating speeds. In addition to providing potential safety benefits, reducing excessive truck speeds can reduce fuel consumption (Cope, 1974) and associated vehicle emissions (Penic and Upchurch, 1992). Because of the safety and economic benefits of speed governors, there seems little reason not to require their use.

The United States lags behind Europe, Australia, and Japan in requiring speed limiters on large trucks. In 2002 the European Union adopted a requirement (Directive 2002/85/EC) mandating the installation of speed limitation devices for all vehicles carrying 8 or more passengers and all vehicles weighing more than 3.5 metric tons. Under the regulation, these vehicles must have speed limiters set not to exceed 90 km/h (56 mph).

Given the very large mass of trucks, a maximum speed for trucks lower than 68 mph would be safer. Europe's experience with speed limiters that cap truck speeds at a speed substantially lower than the average speed of passenger vehicles demonstrates that a maximum truck speed much lower than 68 mph is practical. The proposed cap of 68 mph is a starting point.

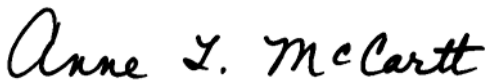
There is public support for speed governors on trucks

To gauge public opinions regarding speeding on interstate highways and a requirement for speed governors on large trucks, IIHS commissioned a nationally representative telephone survey of licensed drivers. Results are summarized in Appendix B. More than 8 of 10 drivers said speeding on interstate highways and freeways is a safety problem, and 4 of 10 drivers said it is a big safety problem. Sixty-four percent of the drivers favored a federal requirement that speed governors be used in large trucks to limit truck speeds. Three-fourths of drivers who favored the requirement said speeds of large trucks should be limited to lower than 70 mph.

Summary

There is ample evidence that requiring speed governors in large trucks will enhance safety. Capping truck speeds will promote fuel savings and other efficiencies, and there is widespread use of speed governors by many carriers. Although 68 mph is a reasonable starting point for rulemaking, a cap below 68 mph would be safer. A speed governor requirement is a win-win proposition for the trucking industry and the public.

Sincerely,



Anne T. McCartt
Senior Vice President, Research

cc: Docket Clerk, Docket No. NHTSA–2007–26851

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Appendix A
Summary of Travel Speeds on Rural Interstates

Table A-1
Large Truck Speeds on Rural Interstates – 1996 and 2006

	Speed limit (mph)		Percent >68 mph		Percent >70 mph		Percent >75 mph	
State	**1996**	**2006**	**1996**	**2006**	**1996**	**2006**	**1996**	**2006**
Montana	65	65	58	15	49	8	27	2
Nevada	75	75	40	52	29	41	8	14
New Mexico	75	75	42	55	27	43	4	10

Table A-2
Percent of Tractor-Trailer Trucks Exceeding 70 and 75 mph on New Mexico Rural Interstates – 1991, 1996, 2003, 2006

	Speed Limit	Percent >70 mph	Percent >75 mph
1991	65	16	4
1996	75	38	8
2003	75	44	12
2006	75	49	14

Appendix B
Public Opinion Survey on Speed Governors, February 2007
Insurance Institute for Highway Safety

A survey of licensed drivers nationwide was conducted to assess attitudes toward speed governors. The survey uses a fully replicated, stratified, single-stage sample of households obtained through random-digit-dialing. Equal proportions of males and females were surveyed, and results were weighted to represent the population based on the US census. Results are summarized in the following table.

	Percent
	N=1,972 (weighted results)
How often do you drive on interstate highways or freeways?	
Frequently	56
Occasionally	39
Never	5
Do you think speeding on interstates and freeways is:	
Somewhat of a safety problem?	42
A big safety problem?	42
Not much of a safety problem?	16
A device known as a speed governor is available and already installed on many large trucks to limit their maximum speed. The federal government is considering a requirement that all large trucks be equipped with speed governors. Would you favor or oppose a federal requirement that governors be used in large trucks to limit truck speeds?	
Favor	**64**
Strongly favor	40
Somewhat favor	24
Oppose	**33**
Somewhat oppose	13
Strongly oppose	20
Don't know	**4**
Among total respondents who favor the use of speed governors in trucks What do you think the maximum speed for large trucks should be?	(N= 1,254)
55 and under	25
60-64	18
65-69	33
70-74	10
75 and higher	5
Don't know	8
A device known as a speed governor can be installed in cars to limit their maximum speed. Would you favor or oppose the use of speed governors on cars?	(N=1,972)
Favor	**34**
Strongly favor	17
Somewhat favor	16
Oppose	**63**
Somewhat oppose	22
Strongly oppose	41
Don't know	**4**
Among total respondents who favor the use of speed governors in cars What do you think the maximum speed for cars should be?	(Weighted N= 663)
55 & under	17
60-64	15
65-69	30
70-74	16
75+	18
Don't know	3