

Imposing Speed Limiting Technology on America's Trucks



– Hurting Small Businesses, Highways and the Economy.

Safety

Proponents of speed limiters have claimed that speed limiting trucks will make highways safer, but this is not supported by related research. In 1991, the National Highway Traffic Safety Administration in a report to the US Congress as required by the Truck and Bus Safety and Regulatory Reform Act of 1988 concluded that, "...the incremental benefits of mandatory speed limitation in terms of either crash reduction or lives saved are questionable^[1]." Also in 1991, the American Automobile Association Foundation for Traffic Safety sponsored research that concluded there were no safety benefits resulting from the imposition of speed and lane restrictions on trucks^[2]. Conducted by the University of Virginia, the research found that there are negative results of truck lane and speed control strategies, such as increased congestion and skewness of speed distributions.

Proponents of speed limiters claim that the devices actually relax drivers and help them de-stress, but research does not support this. Research indicates that time on task increases fatigue and ability to perform^[3]. In many jurisdictions speed limiters will force drivers to spend more time behind the wheel contributing to fatigue. The Owner-Operator Independent Drivers Association Foundation conducted a survey of 15,327 drivers and the majority of respondents stated that they have concerns about driving speed limited trucks. The top concerns are: lack of passing speed, congestion, being rear ended, driving longer, and frequently being passed.

Speed limiters will create speed differentials between cars and trucks and cause highways to become less safe. The frequency of interactions with other vehicles by a vehicle traveling 10 mph below the posted speed limit is 227% higher than when moving at traffic speed. More interactions of vehicles leads to greater chance of accidents^[4]. X.G. Liu examined accident data from 1969 to 1995 in Canada and concluded that for every 1 km/h increase in speed differential, the casualties increased by 270^[5].

The vast majority of fatal accidents occur on roads other than those designed to interstate highway specifications as well as in areas or under conditions that necessitate speeds less than 68 mph. The United States Department of Transportation reports that "[t]he number of speeding-related fatalities is the highest in arterial roads followed by local/collector roads and finally interstates^[6]." This is backed up by the Federal Motor Carrier Safety Administration where they report that 74.1% of truck-involved fatal crashes occur on non-interstates where speed limits are lower^[7]. Driving too fast for conditions, NOT exceeding the posted speed limit, causes most speed-related truck crashes. Data show that large trucks involved in crashes that were exceeding the posted speed limit was 0% (zero percent) on rural interstates and only 2.8% on all roadways^[8]. Furthermore, research demonstrates that when "truck accidents caused by speeding trucks is reported, care

must be taken to understand that most of the trucks were not traveling at a rate above the posted speed limits^[9]."

Environment

Proponents of speed limiters claim that there are significant environmental benefits from speed limiting heavy trucks, but research is basically non-existent. However, there have been studies conducted on speed reduction and correlations to the reduction of dangerous emissions in Switzerland by the Paul Scherrer Institute. The study showed no reduction in dangerous emissions when the speed limit was reduced to 80 km/h^[10]. Dr. Barry Prentice, Director of the Transport Institute at the University of Manitoba in a recent article stated that any "net reduction in GHG emissions attributable to speed limiters assumes that the remainder of the traffic flow is not affected. If speed governors on trucks cause increased traffic congestion or force more speed adjustments by cars and light trucks, GHG emissions could increase. Accelerating and decelerating creates more emissions than travelling at a constant speed." Furthermore, A.J. Kean found that vehicle acceleration and deceleration have a significant impact on emission rates^[11]. In addition, when drivers are faced with a loss of power because of a speed limiter or feel the pressure of the ticking Hours of Service clock, they have a tendency to put the "pedal to the metal" at all times making it unsafe in slower speed limited areas and negating any theoretical environmental savings.

Economy

Proponents of speed limiters have long argued that the devices should be mandated in the United States because they will improve highway safety. Most recently, proponents have argued that they are necessary in order to achieve fuel savings and reductions in GhG emissions. These are unsubstantiated and misleading claims. The fact of the matter is that supporting speed limiters is about big businesses, unfairly trying to eliminate small business competition and leveling the playing field. On average, small business owner operators are more experienced and know how to operate a truck safely at the "sweet spot" in order to achieve maximum fuel economy.

The "sweet spot" is a speed at which a truck must travel, based on a variety of factors including gear ratio and tire size, in order to obtain optimum fuel efficiency. If small business truck drivers didn't operate at this level, they would simply be out of business. However, because of the economy, many small business trucking operations are being driven out of business. A survey done by Avondale Partners suggests that in 2008 almost 2700 trucking operations have failed, many of these are small businesses^[12].

Highway safety, fuel savings and GhG reduction can be achieved by other means such as increased driver education and training and increased law enforcement.

[1] National Highway Traffic Safety Administration (1988), Commercial Motor Vehicle Speed Control Devices.
[2] Garber, N.J. and Gadiraju, R(1989). Speed Variance and Its Influence on Accidents, University of Virginia, Charlottesville.
[3] Bokesman, Marten A.S. "Experimental and Work Psychology, University of Groningen, "Effects of mental fatigue on attention: An ERP study" (2005).
[4] Johnson, Steven L. Cost-Benefit Evaluation of Large Truck-Automobile Speed Limit Differentials on Rural Interstate Highways, Mack-Blackwell Transportation Center, University of Arkansas (2005).
[5] Liu, X.G. "Travel Speed and Speed Differential and Their Effects on Traffic Safety", Transport Association of Canada (1998).

[6] National Highway Traffic Safety Administration, Analysis of Speed-Related Fatal Motor Vehicle Traffic Crashes (2005).
[7] Large Truck Crash Facts 2005.
[8] Federal Motor Carrier Safety Administration, Large Crash Causation Study (2006).
[9] Johnson, Steven L., see [6].
[10] Influence of Reducing the Highway Speed Limit to 80 km/h on Ozone in Switzerland (2003).
[11] Kean, A.J. "Effects of Engine Speeds and Engine Load on Motor Vehicle Emissions, (2003).
[12] Avondale Partners, LLC, Trucking Still Driving Into the Ditch – Record Number of Trucks Exit Highways in 2008 (October 27, 2008)

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A few select groups, claiming to represent the interests of the entire trucking industry, have been misinforming public officials throughout North America about the benefits of requiring all heavy trucks to employ speed limiters. As studies and experience have shown, mandating speed limiters in the U.S. will actually make highways less safe and will hurt small businesses and the economy without any real environmental benefit. Mandating speed limiters rewards large corporations who fail to hire the safest, most experienced drivers available and punishes the small businessmen and women who have built a career on fuel economy and safety. To the right are some verifiable facts which demonstrate the impact speed limiters will have on safety, small businesses and the economy.

- Speed limiting heavy trucks will not make highways safer. Research has found that mandatory speed limitation creates unsafe vehicle interactions and the benefits in terms of either crash reduction or lives saved are questionable.
- Research shows that the majority of drivers do not like driving speed limited trucks. The top three concerns listed by drivers in such research included (i) lack of passing speed, (ii) congestion, (iii) being rear ended.
- The vast majority of all accidents occur on roadways or in certain areas of highways (such as in cities or construction zones) where the posted speed limit is less than the proposed speed limiter setting. The majority of speed-related truck crashes occur while driving too fast for conditions, not exceeding the posted speed limit.
- Speed limiters on trucks have a tendency to create speed differentials between trucks and other faster moving vehicles in many jurisdictions. Research indicates that when speed differentials are present the frequency of interactions with other vehicles increases. The vehicle interaction rate with a vehicle traveling 10 mph below the posted speed limit is 227% higher than a vehicle moving with the flow of traffic. The safest highways are those where traffic travels at the same rates of speed. OOIDA believes that increased enforcement of the speed limit on all traffic will improve highway safety, help achieve desired environmental benefits, and have little economic impact.
- Research conducted in Canada indicates speed limiters do not make highways safer. Accident data from 1969-1995 in Canada showed that for every 1 km/h increase in speed differential, casualties increased by 270.
- Research shows that speed limiters will not provide significant environmental benefits. In fact, studies show that disruptions in traffic flow escalate acceleration and deceleration by other vehicles thus increasing overall emission rates. In addition, drivers have a tendency to “put the pedal to the metal” when operating under a speed limited engine in order to make up for lost time and power. Continuous revving of the engine negates any theoretical fuel savings or GhG emission reduction.
- Certain proponents have claimed that 74% of all trucks in the United States operate with a speed governed engine. This is false. Research indicates that the overwhelming majority of small carriers (20 trucks or less) do not employ speed limiters and this represents 96% of the US trucking industry.

(Please see reverse side for more information.)