

Differential speed limits make roads less safe

Studies show that a higher variance of vehicle speeds in traffic flow increases the risk of an accident

In 1964, David Solomon wrote a report entitled *Accidents on Main Rural Highways Related to Speed, Driver, and Vehicle* published by the Bureau of Public Roads (predecessor to the Federal Highway Administration). In order to define the relationship between speeds, characteristics of drivers and vehicles, and accidents, Solomon collected data from 11 cooperating states on 600 miles of main rural highways. The study recorded 10,000 drivers across 2-lane and 4-lane highways, and discovered vehicles travelling 10-15 mph less than the average speed of all traffic had a much greater chance of being involved in a crash. Solomon presented his findings in a distinguished “U-shape” curve, which has now become famous.¹

In fact, Solomon wrote that regardless of the average speed on the highway, the more a driver deviates from the average speed, the greater his or her chance of being involved in an accident. Low speed drivers are more likely to be involved in accidents than high-speed drivers are, as 80% of rear-end collisions involving a large truck and a car resulting in a fatality, the passenger vehicle rear-ended the truck.²

Additional research studies have been published through the years that support Solomon’s conclusions, such as the *Interstate System Accident Research Study II* published by the Bureau of Public Roads (now the FHWA) and the *Commercial Motor Vehicle Speed Control Devices* published in 1991 by the National Highway Traffic Safety Administration (NHTSA). Both studies confirmed the “U-shape” curve established initially by Solomon.

More recently, Ohio lawmakers dismantled a proposal to increase speed limits along the Ohio Turnpike and rural freeways from 70-mph to 75-mph after the conference committee listened to concerns expressed by the trucking industry that raising the speed limit would cause more accidents, as passenger vehicles would pass slower-moving trucks more frequently and at higher speeds. Many of the large carriers traveling along the Turnpike have speed limiters set between 62-68 mph.³

Speed differentials = more traffic interactions = greater likelihood of accidents

In 2005 Dr. Steven L. Johnson of the University of Arkansas conducted a study entitled *Cost-Benefit Evaluation of Large Truck-Automobile Speed Limit Differentials on Rural Interstate Highways* which found that differentiating speeds were shown to produce more interactions between vehicles.

Dr. Johnson found that as the speed of an individual vehicle deviates from the mean traffic speed on a roadway, the number of interactions between vehicles increases and the potential for being involved in

¹ David Solomon, *Accidents on Main Rural Highways Related to Speed, Driver, and Vehicle*, Bureau of Public Roads (1964), pg. 1.

² Transport Topics, “Trucker Driver Fault: What are the Odds?” Transport Topics (April 22, 2013), <http://www.ttnews.com/articles/basetemplate.aspx?storyid=31803&page=2> (accessed April 22, 2013)

³ Jeremy Pelzer, “Here’s why Ohio lawmakers scrapped plans for 75-mph speed limits, new left-lane restrictions,” *Cleveland.com* (March 30, 2015), http://www.cleveland.com/open/index.ssf/2015/03/heres_why_ohio_lawmakers_scrap.html#top (accessed March 30, 2015)

accidents increases. The frequency of interactions with other vehicles by a vehicle traveling 10-mph below the posted speed limit is 227% higher than moving at traffic speed.⁴

In similar fashion, in 1993 the Transportation Research Board of the National Research Council published a study by John E. Baerwald, which found that vehicles travelling at or about the same speed minimized the need for overtaking, passing and lane changes and, as a result, caused fewer accidents.⁵ This too was supported recently by the United Kingdom, which in April 2015, increased the national speed limit for heavy goods vehicles from 40-mph to 50-mph in order to reduce risky overtakes by frustrated car drivers.⁶

Most states have eliminated speed differentials for cars and trucks on interstates

Currently, there are nine states that implement speed differentials for heavy-duty trucks. Imposing differential speed limits was a popular practice in the 1980's, but in past two decades states have been systematically eliminating "split speeds" as states have come to recognize their negative safety implications.

In the past few years Texas, Illinois, Ohio have acted legislation to eliminate speed differentials on interstates. Kansas, Maine and Virginia have also enacted legislation to reduce or eliminate speed differentials on their interstates and other roadways.

Julie Cirillo, a former Assistant Administrator and Chief Safety Officer of the Federal Motor Carrier Safety Administration (FMCSA), stated in a sworn affidavit, "Jurisdictions responsible for ensuring the safety of the travelling public should not take any action that could result in creating an unsafe situation. Included in these actions would be the establishment and enforcement of differential speed limits for passenger cars and commercial vehicles. Adherence to differential speed limits creates a situation where a significant percentage of traffic is operating more slowly than general traffic. The studies described herein establish that this is always unsafe (Cirillo Aff. 39)."

Small business trucking professionals and professional truck drivers oppose differential speed limits

OOIDA is opposed to posted speed differentials for heavy-duty trucks because it decreases safety by increasing the interaction between large trucks and passenger vehicles. There is no clean and substantial evidence that supports the use of different posted speed limits. OOIDA obviously does not condone speeding or any other unsafe driving habits. In fact, OOIDA strongly encourages truckers to comply with all state laws and federal regulations. OOIDA advocates for many initiatives that will increase safe operations in the trucking industry as well as on highways throughout the United States such as a comprehensive entry-level driver-training rule (the Association is currently an active member in the Negotiating Rulemaking process), and increased supply chain stakeholder accountability.

⁴ Steven L. Johnson, *Cost-Benefit Evaluation of Large Truck-Automobile Speed Limit Differentials on Rural Interstate Highways*, Mack-Blackwell Transportation Center, University of Arkansas (2005), pg. 98.

⁵ Affidavit of *Julie Cirillo*, Fair Fax County, Virginia, 8 September 2011.

⁶ "Faster HGVs could cut dangerous overtakes," Spalding Guardian Lincolnshire Free Press, <http://www.spaldingtoday.co.uk/news/latest-news/faster-hgvs-could-cut-dangerous-overtakes-1-6674323>

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