



Blog by Tommy Ruke, The King Pin – Leading Expert in Truck Insurance

SELF-DRIVING TRUCKS

I was asked by Jacquelyn Connelly, Senior Editor for the Independent Agent (an online magazine and the flagship publication of the Big "I"), and I provided the following article to them. Thought you would be interested in the information, too.

The “talk” of the motor carrier industry – Self-Driving Trucks. People that are not a part of that industry may wonder when will they look up at an 18-wheeler and see no one in the cab. The October 31, 2016 lead article in Transport Topics “Self-Driving Truck Delivers – Otto hauls beer in first commercial shipment.” The article provides the following information: With a professional driver on board October 20, the Class 8 tractor and its trailer loaded with 51,744 cans of beer traveled south in Colorado from Fort Collins to Colorado Springs – with 120 miles of the historic journey occurring with the truck in full autonomous mode on Interstate 25. This was sort of a commercial pilot of what the future might look like. The driver took the truck from the point of origin onto the highway. But on the highway, he engaged the technology, got up and monitored the technology from the sleeper portion of the cab. He didn’t take control again until two hours later as it prepared to exit.

There has recently been a lot of discussion and activity about autonomous and platoon trucking and while some of it has an exhilarating, almost science fiction feel to it – especially the in-person demonstrations – there also are aspects of it that are well, commonplace. As is the case with life in general, all of us are surrounded by automation and technology, and the capacities of these systems and their numbers are accelerating rapidly. Heavy-duty trucks are no exception.

Automation is making the driving of trucks for a living less grim and demanding. It’s still not an easy job, but the increasing prevalence of active safety systems for braking, lane departure and following distance means drivers are more likely to avoid accidents and return home safely.

For starters, we learned that “autonomous” is not precisely the right word. It suggests Class 8 trucks without drivers, and that’s 20 to 30 years down the road or maybe more.

Driver assistance through automation is the real issue. It’s as mundane as turn signals that cancel automatically when a turn is complete. Automated manual

transmissions, adaptive cruise control and anti-rollover systems are more complex yet not as exotic.

Broad based development of these systems can only make them cheaper and is there anyone who has ever sat behind a wheel that at some point didn't plead for a second chance? So far, most of these systems have been put into use without government mandates but rather on consumer demand; a fairly happy practice.

Two-truck platoons with drivers steering in both vehicles will come next, but two trucks could become three or four. A system comparable to autopilot for jet aircraft has been floated for long haul solo drivers, not to displace them but to make the journey less draining.

From Greg Fulton's December 12, 2016 [Transport Topics](#) Opinion Article "Safety Is Greatest Benefit of Autonomous Tech", there has been a great amount of media attention with the first delivery by autonomous truck by Otto Transportation, which recently took place on Interstate 25 from Fort Collins to Denver in Colorado. While this trip was made with a convoy of State Patrol and Colorado DOT vehicles around it, this event still represented quite an achievement.

While the driverless storyline made good grist for the present, it unfortunately squeezed out the key message related to the safety benefits and opportunity that the technologies on the Otto truck offer to reduce crashes and highway fatalities. The integration of various safety technologies on this truck, such as sophisticated radar, laser light sensors and cameras, that will enhance safety, should have been the real story.

The reasons that driverless trucks and planes will not occur anytime soon are both societal and technical. First, the public is not comfortable about flying on an airplane without a pilot, nor are people at ease with seeing an 80,000 pound driverless truck traveling next to them on our highways. While the systems may function exceptionally well, the public has experienced plenty of instances in their own lives where computerized systems have failed.

While the autonomous system technologies have and will continue to improve, the challenge to maintain and keep these sensitive systems fully functioning when these same trucks are operating on all types of roadways, terrain and weather for more than 100,000 miles per year will be enormous.

As we look at these new, advanced safety technologies as a means to address a rising crash problem, the fact should not be lost on us that the genesis of that predicament often lies largely with the unanticipated consequences from our society's rapid adoption and use of another relatively new technology: cellular phones.

The government has also stepped in. From HDT's October 2016 article, "DOT Issues First Autonomous-Driving Guidelines." The Department of Transportation released the first federal guidelines for the testing and deployment of autonomous vehicles. The 15-point safety assessment provides automated vehicle performance guidance for manufacturers, developers, and other organizations. The assessment process is intended to set clear expectations for manufacturers developing and deploying automated vehicle technologies.

We are being over-loaded with information about technology and autonomous vehicles, so the question is always what does it mean to me (the insurance industry). By all the research, these "new devices" help drivers, reduce crashes, and keep them in compliance and save money. What information are we collecting about our insureds using these technologies, and do they in fact, reduce crashes and save the insurance industry money? We do not know yet. Is the insurance industry collecting information about which devices have the most effect in reducing crashes and the cost of claims?

I am often asked, "What is the profile of a good risk?" The current used information is past loss history, safety rating as reflected in the FMCSA System (CSA/SMS), what the insured's drivers' MVR's reflect as well as how long the insured has been in business. I would consider adding these factors: What percentage of the insured's drivers have been with the insured over year? I have often said that if I could only ask one question to decide to provide insurance to a motor carrier, it would be that question. Todd Dills wrote a [ccjdigital](#) article that supports my opinion, "Carriers with higher driver turnover have higher crash rates and poorer CSA scores, analysis finds." Not only how many drivers have been with the insured for over a year, but what is the insured doing to keep their drivers? Are they providing more home time, Bose seats, XM radio, APU's to power their televisions and charge their computers, automatic transmissions? What technology have they added to their equipment? – Collision Mitigation System (CMS), Electronic Stability Control (ESC), Lane Departure Warning Systems (LAWS), Adaptive Cruise Control System (ACCS) – All to help advanced crashes. Event recorders to provide information concerning a crash – A video of the 8 seconds before and 4 seconds after a crash. Industry records show that 75% or so of all crashes between an 18-wheeler and a 4-wheel vehicle are the "fault" of the 4-wheel vehicle. Event records establish facts used to defend the driver's actions. These devices also assist in monitoring and training of drivers.

The more technology a motor carrier uses makes them a better risk. What are insurance providers doing to encourage these investments, to recognize when they are made with risk acceptance and pricing considerations and recording the effects they might or might not have in a crash?

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