



AUTONOMOUS TRUCKS: A PERSONAL PERSPECTIVE

What's it like to ride in an autonomous truck? Not nearly as revolutionary an experience as you might think.

It's no exaggeration to say I was present at the very dawn of trucking's autonomous age. In 2015, I watched as the very first Freightliner self-driving truck — christened the “Inspiration” model — eased its way across Boulder Dam. It was a seminal moment for trucking — and a complete shock to the press corps attending the event. Up until that point, no one was seriously talking about autonomous trucks as a near-future technology. If anyone discussed autonomous commercial vehicles at all, it was nothing more than a nebulous, far-future concept that might possibly be conceivable one day. But now, right there under the lights in front of our press grandstand, was a robot truck driving across a great American landmark all by itself. It was obvious a new age was dawning and that nothing was going to be the same afterward.

It's been almost seven years since that first Freightliner launch, and while we still don't have autonomous trucks in daily operations, the research and advances (and the stunning amount of money pouring into autonomous trucking initiatives) has been breathtaking to behold. The industry has learned a lot in that time — most importantly that putting autonomous trucks safely on our highways will be a lot tougher to accomplish than many experts in 2015 initially believed. Even so, today, in 2022, while the “When” factor of autonomous trucks remains somewhat opaque, there is no doubt that autonomous technology is coming to trucking — most likely before the end of this decade.

I've been lucky enough to go on three separate autonomous Ride & Drives since the unveiling of the Inspiration truck back in 2015. Interestingly,

all of them have been sponsored by Freightliner. (Although that is supposed to change at the upcoming Advanced Clean Transportation (ACT) Expo in Long Beach, CA, next month.) My first ride was in the aforementioned Inspiration truck in and around Las Vegas. My second ride came two years later on a Freightliner trip to Germany. We rode in Mercedes Actros tractors fitted with both autonomous and truck-platooning systems on the Autobahn outside of Dusseldorf. And in November of last year, Daimler's new autonomous technology partner, Torc Robotics, invited me to Albuquerque, NM, for a ride in the latest generation of Freightliner's autonomous trucks.

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From my very first ride in the Inspiration truck, I found the whole autonomous truck experience to be somewhat underwhelming — and I don't mean that in a negative way. That's because the most remarkable thing about riding along in an autonomous truck is just how unremarkable the whole experience is. Granted, there's always been a “driver” positioned in the left-hand seat, (including myself on a couple of occasions) in case something goes wrong. So perhaps the whole experience would be more jarring if that driver seat were vacant.



NAFCE Analyst Jack Roberts prepares for an autonomous demonstration ride in a Freightliner Cascadia at the Torc Robotics Test Facility in Albuquerque, NM, in November 2021.

That said, anyone expecting a radical departure from riding along in a human-driven truck is going to be massively disappointed in their first autonomous ride-along. That's because the autonomous control systems on these trucks mimic human behavior to an astounding degree. And, in many instances — most notably when dealing with crosswinds — their performance is superior to what the most experienced and skilled human drivers are capable of. That's because the response of the electronic control systems to input from the truck's internal sensors is happening literally at the speed of light — or electronic signals, anyway. And no human can ever hope to match that speed and accuracy on that level. Even in Germany, riding in the autonomous Mercedes Actros, the ride was smooth and comfortable, utterly free of suspense or alarm, even in heavy traffic with cars cutting in and out of our platoon convoy.

Ditto for my ride last November in Albuquerque with Torc Robotics. Although the main takeaway from this visit was an inside look at how far autonomous sensor technology — particularly Lidar — has come since 2015. I was able to see first-hand, and in

real-time, just how much information the truck was gathering from the world and roadways around it and used that information to both react to events in its immediate vicinity, as well as “plan” ahead for just-over-the-horizon situations ranging from traffic jams to long grades that would have to be climbed.

In all three of my demonstration rides to date, the most remarkable thing about autonomous trucks is how unremarkable they are out in real-world driving situations. Safety is the primary watchword for this technology and these road tests. And anyone looking for a thrill ride had best go elsewhere. Autonomous trucks are all about safety and efficiency. And that will not change once they enter the marketplace.

About the Author: Jack Roberts is a transportation journalist who has been covering North American commercial vehicles for 25 years and has developed a reputation as a leading authority/futurist concentrating on new trucking technology, including autonomous vehicles, battery-electric trucks and emerging blockchain technology.



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