

GUARDIAN

A Publication of the Commercial Vehicle Safety Alliance

Volume 30, Issue 4
4th Quarter 2023

TECH TALK

Advancements in Commercial Motor Vehicles and Enforcement



**AutoZone Driver
Wayne Hayes Receives the
2023 International Driver
Excellence Award**

**Commercial Vehicle
Enforcement Through
the Eyes of a Local**

**How Driver Behavior
Can Make (or Break) Your
Sustainability Efforts**

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GUARDIAN

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Commercial Vehicle Safety Alliance



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Call for Guardian Submissions

CVSA is looking for interesting, relevant content for its quarterly magazine. We would be happy to consider your news, ideas, insights and articles on issues facing the commercial motor vehicle safety community for upcoming editions of "Guardian" magazine.

**Deadline for first quarter 2024 issue:
Jan. 10, 2024**

Questions? Please contact CVSA Writer-Editor Emily Moorhead at emily.moorhead@cvsa.org.



PRESIDENT'S MESSAGE

Looking Toward the Future

By **Col. Russ Christoferson**, Bureau Chief, Montana Department of Transportation; CVSA President

As I begin my term as CVSA president, I find myself wondering, "What is in store for the future of this organization?" Looking to the future, I can't help but reflect on the past and realize how fortunate I've been throughout my career.

I've had the opportunity to meet countless people in enforcement, federal and provincial agencies, and all across the trucking industry. I realize I've been given these opportunities by the leaders within my own organization who came before me and who helped teach and guide me along the way.

Similarly, CVSA will continue to grow and flourish as long as its leaders are willing to work on succession planning within their own organizations, striving to bring new people to CVSA events, such as the workshops, conferences, the inspectors championship, etc. These new people will become the next leaders of CVSA and help sustain this association.

As we look for new officers and industry folks to succeed us, individuals who attend the inspectors and drivers competitions are great resources for potential leaders within our own organizations. In some cases, CVSA's North American Inspectors Championship (NAIC) and American Trucking Associations' National Truck Driving Championships (NTDC) and National Step Van Driving Championships are the first exposure inspectors and drivers have to the larger CVSA picture, offering shared experiences, ideas and insights.

Our very own CVSA Executive Director Collin Mooney competed in NAIC in 1999. My CVSA leadership path started in 2015 at the annual conference in Boise, Idaho, where I gave a presentation on the new prescreening thermal imaging technology that Montana had been utilizing. This helped get my foot in the door of the organization, and I began to attend the workshops and annual conferences on a regular basis. It did not take me long to realize that it is vital for those who attend these meetings not only to show up but also to actively participate in the discussions.

In 2023, I was able to attend NAIC/NTDC in Columbus, Ohio, where I took the time to chat with and listen to many inspectors and drivers. Despite the underlying competition nervousness, I could see that each and every one of them was excited to be there, not only for the competition aspect, but for the camaraderie and the learning experience that both events bring. These competitions cultivate excitement and passion and expose new people to CVSA events. This is precisely what the Alliance needs.

The competitions are just one of many paths to participating in CVSA events. Regardless of the path taken, the vital point is that future participants and leaders of the organization begin to see the value that CVSA brings to commercial motor vehicle (CMV) safety.

The importance of the work that happens during committee and program meetings at our meetings and conferences cannot be overstated. Member participation during the

meetings is what moves the organization forward. It is up to the jurisdictions and industry members to send individuals to our meetings and conferences who are experienced, knowledgeable and dedicated to their job and are willing to engage in conversations.

The foundation CVSA sits upon has been built over the last several decades, and we must ensure it continues to evolve and grow. This can be accomplished by seeking out those with the fortitude to become deeply involved; then encouraging and empowering them to move into leadership positions. Leaders who can influence, guide and support our members in advancing the CVSA mission will lead the association into the future.

In seeking the leaders of tomorrow, it is essential to identify those who have the full backing and cooperation of their employers, who will support them in giving time to CVSA endeavors. CVSA cannot continue to move forward without these important relationships.

The personal effort of members is imperative, no matter which path they take to getting involved in the organization. With this support, CVSA can go beyond the individual and continue to build a collective and collaborative alliance working together to achieve common goals.

As CVSA continues to move forward, we are poised to continue being the North American leader in CMV safety. This is a direct result of you, the membership, and your dedication to keeping the roads safe for the traveling public. ■



EXECUTIVE DIRECTOR'S MESSAGE

Servant Leadership Within Nonprofit Organizations

By **Collin B. Mooney**, MPA, CAE, Executive Director, Commercial Vehicle Safety Alliance

Servant leaders in nonprofits are humble enough to recognize that they are there to facilitate, not dictate, the path to positive change.

When applied within nonprofit organizations, servant leadership takes on a unique and profound significance. This philosophy emphasizes empathy, humility and a deep commitment to the well-being of others, aligning perfectly with the missions and values of most nonprofit organizations. In this article, I will explore what servant leadership means to me and why I believe it is not only an ideal approach but also essential for the success and impact of organizations, including the Commercial Vehicle Safety Alliance.

Nonprofit organizations are driven by a higher purpose, existing to address a variety of issues within society or specific industries. Unlike for-profit enterprises, their primary focus is not on generating profit for shareholders but on making a positive and meaningful impact on the lives of those within their community or industry.

At its core, servant leadership is about understanding and prioritizing the needs of others. In the context of nonprofit organizations, leaders should have a deep understanding of the cause, community or industry they serve and the people who help the organization reach its goals – employees, members and other stakeholders. What are the challenges they face and the aspirations they hold? This understanding goes beyond data and statistics; it involves an emotional connection with the people and causes to which these organizations are dedicated.

For me, servant leadership in nonprofit organizations means that leaders are genuinely embedded in the community or industry that they serve. They are not distant figures making decisions from behind a desk, but rather active participants in the lives of those they aim to help. They engage in direct interactions, listen to issues and concerns, and adapt their strategies to best meet the evolving needs of their community or industry. Servant leaders in nonprofits are humble enough to recognize that they are there to facilitate, not dictate, the path to positive change.

Empathy is a cornerstone of servant leadership, and it's of paramount importance in the nonprofit sector. Leaders in nonprofit organizations must be able to place themselves in the shoes of those they serve, understanding the challenges and hardships faced by the organization's beneficiaries and celebrating their triumphs and milestones.

Servant leadership in nonprofit organizations encourages leaders to actively seek out feedback and input from their beneficiaries, employees and other stakeholders. This feedback loop is vital for organizations to remain responsive and relevant. It involves not just listening, but also taking action based on what is learned.

The humility that is integral to servant leadership means leaders are willing to admit when they don't have all the answers. They acknowledge the challenges they aim to address are complex and multifaceted. Therefore, they collaborate with other organizations, partner with industry subject matter experts and involve community members in finding solutions. Servant leaders recognize that they are part of a larger ecosystem of change and that their role is to facilitate the collective effort rather than to singlehandedly provide all the solutions.

In the nonprofit sector, where resources are often limited, servant leadership extends to a commitment to stewardship and transparency. Various stakeholders entrust leaders with resources and donations, which must be handled with care and integrity. They are accountable not only to the board of directors but also to donors, members, volunteers, and the communities and industries they serve. This accountability calls for making ethical decisions, ensuring that resources are used efficiently and being transparent about financial matters.

Servant leaders in nonprofit organizations also understand the importance of nurturing the people within their own organizations. Just as they serve the communities or

industries they work in, they must also serve their staff, members, volunteers and board members. This involves creating a supportive and inclusive work environment, offering opportunities for growth and development, and recognizing and celebrating the contributions of every team member. In doing so, servant leaders build a culture of trust and collaboration within their organizations.

Moreover, the impact of nonprofit organizations often extends beyond their immediate beneficiaries. These organizations have a ripple effect, influencing policies, legislation, regulations, attitudes and societal norms. Servant leaders recognize this and embrace their responsibility to advocate for change on a broader scale. They engage with policymakers, collaborate with other organizations and leverage their expertise to address systemic issues that underlie the problems they seek to solve.

In the world of nonprofit organizations, servant leadership means that leaders are driven not by personal gain or prestige but by a passion for their organization's mission and the well-being of the people they serve. They are willing to make personal sacrifices, work tirelessly and persevere in the face of adversity, all for the greater good. Servant leaders inspire others with their dedication and unwavering commitment to the organization's cause.

Servant leadership in nonprofit organizations is a philosophy that resonates deeply with me because it aligns with the fundamental values and goals of these organizations. It means that leaders must deeply connect with the communities or industries they serve, empathize with the struggles and aspirations of their beneficiaries, and approach their roles with humility and transparency. Servant leadership in nonprofits is about more than just achieving organizational objectives; it's about making a profound and lasting impact on the lives of individuals, communities and industries by creating positive change on a grand scale. ■

REGION II

Georgia M CCD K-9 Program Tackles Unlawful Drug Possession

By **Sgt. 1st Class Stephen Burnham** and **Lt. Jonathon Huff**, Motor Carrier Compliance Division, Georgia Department of Public Safety

The Georgia Department of Public Safety's Motor Carrier Compliance Division (MCCD) takes a strong stance against unlawful drug possession in commercial motor vehicles (CMVs). This type of criminal activity can not only compromise the safety of Georgia citizens, but also goes against the professional values that most CMV drivers work so hard to maintain.

An internal data query of criminal charges made by MCCD revealed an alarming increase in unlawful drug possession cases among CMV drivers. From 2020 to 2022, the number of unlawful marijuana possession criminal cases made by MCCD increased by an alarming rate of 84%. More than half of all positive trucking industry drug tests are for marijuana, according to the Federal Motor Carrier Safety Administration Drug and Alcohol Clearinghouse Database. However, the increase in drug cases is not exclusive to marijuana. MCCD has seen an increase of 3.5% in overall drug possession cases in CMVs from 2021 to 2022, with 2023 trending toward an additional increase by the end of this year.

MCCD commanding officer Maj. Andrew Montgomery has taken action to combat these growing trends through a robust, CMV-focused K-9 program to target illegal drug possession and transportation in CMVs. The program, which launched in 2023, began with a vetting process to identify the most trained and experienced drug interdiction officers MCCD had available. Next, MCCD leadership deployed three proven drug interdiction K-9 units and is in the process of adding six more K-9 units throughout the state, assigning each to a geographical region. ■

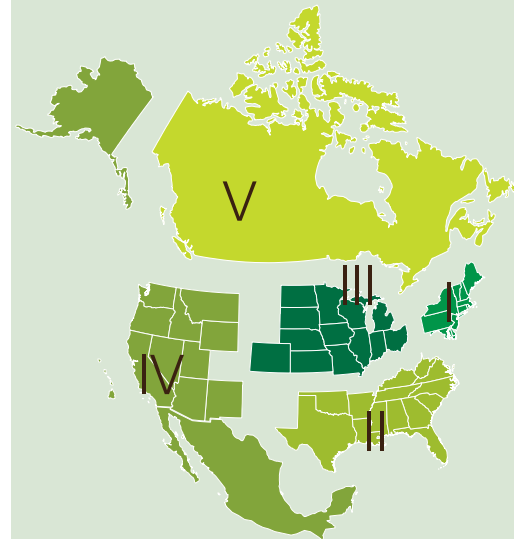
Data Sources:

SmartData, queried May 24
Filters: MCCD, 2020-2023

SafetyNet, queried July 18
Filters: MCCD, Fiscal 2020-2023

American Transportation Research Institute Publication:
"Impacts of Marijuana Legalization on the Trucking Industry" - June 2023

www.truckingresearch.org/wp-content/uploads/2023/06/ATRI-Impacts-of-Marijuana-Legalization-on-the-Trucking-Industry-o6-2023.pdf



REGIONAL MAP

Region I

Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, U.S. Virgin Islands and Vermont

Region II

Alabama, American Samoa, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia

Region III

Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Northern Mariana Islands, Ohio, South Dakota and Wisconsin

Region IV

Alaska, Arizona, California, Guam, Hawaii, Idaho, Mexico, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming

Region V

Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Quebec, Saskatchewan and Yukon



North Carolina Highway Patrol Updates

By **Monica Greiss**, Commercial Vehicle Enforcement Section, North Carolina State Highway Patrol, North Carolina Department of Public Safety

Walmart Safety Event

Walmart invited members of the North Carolina State Highway Patrol (NCSHP) Commercial Vehicle Enforcement (CVE) Section to conduct a safety information presentation in September 2023. Safety Manager Melissa Anderson hosted this event at the Walmart Distribution Center (DC6040) in Hope Mills, North Carolina. CVE members visited the facility and spoke to drivers as they prepared to depart for or returned from their routes. The CVE members accompanied drivers as they performed pre-trip inspections and answered questions about the CVSA inspection process and items that were most often discovered during inspections. The drivers were excited to have the CVE members at the facility, enabling them to speak and ask questions in a fun, friendly environment.

While there, CVE members had the opportunity to eat breakfast and lunch with the Walmart drivers and facility staff. Walmart provided a tour of the facility and showed CVE members how its distribution functions. Members also visited the maintenance garage and met the maintenance staff, discussing the common inspection issues and the best ways to document violations. This interaction will allow the maintenance staff to know items to inspect closely upon a truck's or trailer's return. This was a positive trip and a great corporate partnership. Walmart and NCSHP CVE are hoping to make this a regular event.

Participating NCSHP members included Cpt. Joseph Memory IV, 1st Sgt. Travis Ingold, Tpr. Brandon Johnson, Tpt. Benjamin Holder, Tpr. Steven Spivey, Tpr. Christopher Baker, 1st Sgt. Johnny Edwards and Sgt. Ryan Thomas. ■



Tpr. B.S. Johnson chats with a Walmart employee.



Tpr. C.S. Baker and a Walmart employee take a look underneath a trailer.

North Carolina Police Utilize Acusensus System

The NCSHP CVE Section is actively utilizing the Acusensus Heads-Up Realtime Distracted Driving Enforcement System, a group of cameras that use artificial intelligence to detect infractions such as seatbelt usage and illegal cell phone use. This technology helps enforce traffic safety laws intended to encourage seatbelt usage and prevent distracted driving. The CVE Section currently deploys three Acusensus Systems in our state's eastern, central and western regions. Each system is moved within its assigned region every week and placed in locations evaluated as high-crash corridors.

Commercial motor vehicle (CMV) enforcement on seatbelt violations and hand-held-mobile-telephone-while-driving violations increased from Jan. 1, 2020, through Dec. 31, 2022, and then again for the period since NCSHP introduced Acusensus: June 1 to Sept. 19. And, 66% more seatbelt violations were indicated during that roughly 3.5-month period than in 2022 in its entirety. More mobile phone citations were issued in the 110 days of Acusensus use than in the prior three years combined.

These numbers demonstrate that the Acusensus System is critical in ensuring our roadways are safer through enforcement and education. It also allows every interaction to be an opportunity to educate CMV drivers on the dangers of distracted driving and for CVE members to offer approaches to deter unsafe driving behaviors in the future. ■



(Left to Right): Jack Mathews (Acusensus), Capt. J. A. Memory, IV, Lt. K. T. Shallington, 1st Sgt. D. B. Finch, Jr., Sgt. G. M. Moore, Tpr. W. C. Wheeler, Cliff Adams (Acusensus)

2023 North American Inspectors Championship

Tpr. Brandon Johnson was selected to represent the NCSHP CVE headquarters at the 2023 North American Inspectors Championship (NAIC) that took place Aug. 15-19 in Columbus, Ohio. A first-time participant, Tpr. Johnson was able to experience the competition alongside the best CMV inspectors from across the country.

Tpr. Johnson said he has always heard that experience is the best teacher. Upon his return from NAIC, he stated that *evaluated* experience is the superior teacher and that NAIC allowed him to evaluate his experience with other inspectors and find his strengths and weaknesses in a positive and supportive environment.

Tpr. Johnson had the opportunity to participate in the HM/DG Olympics and the CVSA out-of-service exam as part of the competition. He also attended CVSA hands-on training pertaining to hydraulic brake systems, brake assist devices and performance-based brake tester devices. He was pleased to win the drawing for all the NAIC participant patches.

NCSHP CVE headquarters members had the opportunity to see all the patches, and he plans to share his collection via a display in his office. Tpr. Johnson feels that he walked away a better inspector and would encourage anyone to attend NAIC in the future. ■



(Left to Right): Team Leader Melanie Kurtz (Public Utilities Commission of Ohio), Courtney West (Connecticut Department of Motor Vehicles), Trevor Detgen (Michigan State Police), Teresa Burchard (Wisconsin State Police), Bryan McPeck (Illinois State Police), Melanie Russel (Iowa State Patrol), Brandon Johnson (North Carolina State Highway Patrol), Danielle Adair (New York State Department of Transportation)

Mrs. Teresa P. Daunais Announces Retirement



With over 20 years of North Carolina state service, Teresa Daunais announced her retirement effective Sept. 1. Daunais began her career with the state of North Carolina as a temporary employee in the position of data

entry operator and four months later was hired permanently. Shortly thereafter, Daunais was promoted to unit supervisor. One of the unit's responsibilities was to hand key commercial motor vehicle inspections into the SafetyNet System. Daunais also took part in developing North Carolina's third-party inspection system, referred to as FuelTaCS.

Daunais became part of the commercial vehicle enforcement team prior to the creation of the DataQ System. One of her many contributions to CMV safety was assisting in the preparation for writing the first DataQ manual. Before it became mandatory in 2010, the DataQ System was a voluntary tool states could utilize. In 2010, DataQ's use increased by 600% in North Carolina.

Thanks to the diligence and dedication of Daunais and her fellow analyst B. J. Lee, in 2011

NCSHP CVE received a Federal Motor Carrier Safety Administration Leadership Award for Data Quality Improvements. Their combined efforts also made continuous federal basic grant awards possible for North Carolina. In 2012, NCSHP presented Daunais and Lee with The Highway Patrol Meritorious Award.

Daunais was also active in CVSA and was a longtime Information Systems Committee member, serving as a Region II voting member for many years. She provided input on the SafeSpect System. Daunais enjoyed the camaraderie provided by CVSA, between the states and other contacts she made and maintained throughout her career and beyond. She stated that over the years, she has met people and gone places she would not have had the opportunity to had she not been a member of CVSA.

Daunais loved her position and always wanted to make sure that our members, the industry and all who drive to or through North Carolina were safe on our roadways. Not only did Daunais make a difference while employed with NCSHP CVE, but the fruits of her labor will be seen for years to come. Thank you, Teresa, for your contributions and dedication toward CMV safety. We wish you all the best! ■

Florida Highway Patrol Commercial Vehicle Enforcement Outreach

By **Sgt. Denise Meredith**, Office of Commercial Vehicle Enforcement, Florida Highway Patrol

The Florida Highway Patrol Commercial Vehicle Enforcement Unit has been partnering with multiple motor carriers across the state in an effort to improve safety on our roadways through education. Troopers have shared the importance of a thorough pre-trip inspection, commercial driver's license requirements, hours-of-service requirements, load securement and the Truckers Against Trafficking program, along with other topics. Drivers especially enjoy the interactive demonstration of a roadside inspection. ■



Tpr. Maurice Vilsaint demonstrates a roadside inspection in Leesburg, Florida.



Lt. Steve Brown and Sgt. Chris Weed discuss load securement.



Cpt. Amos Santiago and Sgt. Denise Meredith discuss oversized loads and load securement.



Tpr. Kevin Nelms discusses pre-trip inspections.

REGION II

Commercial Vehicle Enforcement – Through the Eyes of a Local

By **Chris Vinson**, Commercial Vehicle Enforcement, Midlothian (Texas) Police Department

I am Chris Vinson with the city of Midlothian (Texas) Police Department, assigned to the commercial vehicle enforcement (CVE) unit. I want to take a moment to share my experiences in CVE through the lens of a local and highlight some things that have helped me grow tremendously through my tenure.

I have 20 years in law enforcement, starting my traffic career as a motorcycle officer with the DeSoto Police Department in Texas. I occasionally assisted our commercial motor vehicle (CMV) officers on truck inspections. At that point, all I knew about trucks was that they were large, had strange paperwork and really messed up crash paperwork. As a motorcycle officer, the days grew long, and sometimes my work didn't seem to have a significant impact as I would see the same offenders over and over. I noticed that when the CMV inspectors caught bad brakes or other violations, they had the ability to park these trucks until they were repaired. I got to thinking that they were really making an impact on safety.

In 2012, I was given the opportunity to get my North American Standard Inspection Part A and B certifications and split my duties between motorcycles and CVE. I caught the inspection bug. I did this shared duty until the two commercial officers retired, and then I took over the unit. Being in a suburb of Dallas, we did not have any interaction with the Texas Department of Public Safety (DPS) CMV troopers. I didn't really know other inspector working groups throughout the metroplex, and I sure didn't know anything about CVSA other than they produced the out-of-service criteria book. All I knew was what the two guys who did the job before me had taught me. Now, I thought I was doing a pretty good job. I wasn't getting DataQ challenges or calls from the state saying otherwise. But soon a whole new world in CVE would open up for me...

Fast forward to 2018: I was invited to start the Midlothian Texas Police Department CVE unit. This was in Ellis County, which shared enforcement with Texas DPS CMV troopers. This was my first opportunity to work with other inspectors. I soon discovered that some of the other cities in the area had local inspectors who held monthly, cross-jurisdictional working groups to conduct Level I inspections together to achieve uniformity. I began working with DPS and other city inspectors, and my eyes were opened. While I wasn't doing a terrible job before, I quickly learned that I wasn't doing everything as thoroughly as I should have been. Through this group, I learned of the good work done through CVSA nationally and locally through the Dallas/Fort Worth Council



We all play in the same sandbox and work to accomplish the same goal of highway safety.

of Safety Professionals. I began attending their monthly lunch meetings and got approval from my chain of command to attend my first CVSA conference.

With these new connections, I started to grow rapidly as an inspector. At the safety professionals' council meetings, I was able to interact directly with CMV industry members on neutral ground and really started to learn their side of the industry – as well as their struggles. At that first CVSA conference, I discovered that even as local members, we had a voice and value at the table. I had never seen anything like this in law enforcement before. I thought back to my motorcycle cop days and realized that CMV officers can make a difference and, when we work together, make an even greater impact. Now I truly had a hunger to get involved and do my part to influence road safety. I was elected as the CVSA Local Member Vice President, and I now strive to bring more locals to this awesome experience. I realized quickly that there was a huge wall between roadside enforcement officers and drivers. To get past it, I started conducting safety talks at local companies and found that it's much more effective to convey the compliance message at the truck yard rather than on the phone or by email. This experience gave me a passion for industry education.

Wanting to see just how much I could grow, I began competing at the Texas DPS regional inspector challenges and again realized that I still didn't know half of what I thought I did. But every time I competed, I learned a ton. This year I was blessed with the opportunity to compete at my first North American Inspectors Championship. First, I must credit my amazing wife for supporting and encouraging me

throughout my career. Second, I owe my attention to detail and ability to understand and navigate the regulations to my work partner and the inspectors in the Dallas Fort Worth (DFW) metroplex. We work so closely together that we constantly drive each other to be better. Third, I owe a great deal to the industry partners in DFW for attending our working group details and constantly offering their insight, filling the gaps in my knowledge of the trucking industry. We are a family in this industry, and we must all work together to bring about safe roadways.

I share all of this to bring home the importance of getting outside your comfort zone and working with other agencies and officers. For my DPS partners out there, I encourage you to reach out to any inspector working groups in your area. I have learned from everyone I have had the privilege of working with, whether from local jurisdictions or DPS.

If you live outside of Texas and have a trucking association in your state, please attend their meetings. Provide them with solid information but also ask questions and be willing to learn from them. Furthermore, I can't emphasize enough the value of attending CVSA events and trainings. Hearing the "hows" and "whys" of other CMV professionals from across North America really gets you thinking about what you do roadside. You cannot place a value on the contacts and friends you make at these events. It's beyond measure.

We all play in the same sandbox and work to accomplish the same goal of highway safety. This is a standardized program, and the only way we accomplish uniformity is if we all work together and do it the same way. ■

Patrol on Point – Colorado Updates

By **Helena Shae**, Innovative Technology Deployment Program Manager, Colorado Department of Public Safety

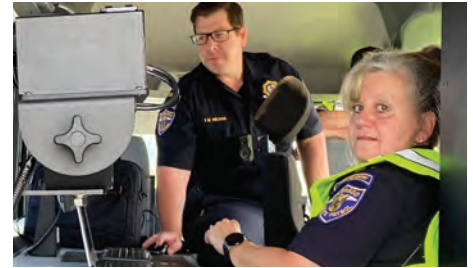
On Aug. 3, the Colorado State Patrol Innovative Technology Deployment program hosted end-user rollout training for Drivewyze Smart Roadside data and screening systems. These vans are designed to pre-screen for joint commercial motor vehicle (CMV) enforcement operations and gather data on CMV traffic in locations unsuitable for safe mobile operations. They provide automated readings of department of transportation numbers, license plates and placards on CMVs at highway speeds. The data is screened for several safety metrics, and the records are stored in the point-of-entry (POE) business system.

Approximately 20 POE officers, Motor Carrier Safety Assistance Program troopers,

visitors from the Nevada Highway Patrol and Drivewyze staff members spent several hours on technology, operations and safety before lunch. The group then convened for an afternoon at the track with special guests from Offen Petroleum of Commerce City, Colorado. Officers trained on the deployment of the smart units, and Offen representatives drove many laps to demonstrate to users how their new tools would function roadside at various speeds.

The training also provided an opportunity to see the roadside setup from the perspective of a CMV driver. Many class participants took the opportunity to ride with professional driver, Chris, for a lap or two.

Headquarters personnel have set up the systems to be scheduled and checked out via a simple procedure on their drive with their state-issued phones. One staff member is presently working in various capacities on the Colorado Western Slope, and joint operations are being scheduled statewide. ■



REGION IV

Virtual Weigh Stations in Washington State

By **Jonas J. Mast**, Motor Carrier Safety Division, Washington State Patrol

Virtual weigh stations (VWS) provide crucial real-time data about commercial motor vehicle (CMV) operations. The primary purpose of a VWS is to increase compliance with weight restrictions and safety regulations, contributing to safer roadways. Beyond enforcement, the data gained from these VWSs can be instrumental in highway infrastructure planning by providing valuable insights that help transportation authorities make informed decisions. Here is a look at how VWSs collect valuable data for commercial vehicle enforcement and highway planning in Washington state.

Commercial Motor Vehicle Enforcement

VWSs are vital tools for enforcing regulations pertaining to CMVs. Essentially, they equip enforcement agencies with three types of data:

1. Weight data: VWSs use weigh-in-motion (WIM) technology to measure the weight of vehicles as they drive over sensors in the road. This helps identify overweight vehicles that may cause pavement damage or safety issues, serving as an important compliance tool.

2. Vehicle identification data: VWSs are often equipped with license plate recognition (LPR) technology and side view cameras. LPR captures and deciphers a vehicle's license plate number while the cameras capture images of the vehicle. Together, these features can identify whether a vehicle is a CMV and whether it has any visible safety violations.

3. Compliance data: When integrated with electronic screening systems, VWSs can check whether CMVs have proper permits, registration, taxes and safety ratings. Systems can be linked to national databases to identify any further compliance issues and violations. One significantly important check is for out-of-service (OOS) motor carriers.

The data is accessible by Washington State Patrol (WSP) commercial vehicle enforcement officers (CVEOs) and troopers using a mobile platform installed in vehicles. It is no longer necessary to be at a computer at a weigh station to access the information needed to take the proper enforcement.

Highway Infrastructure Planning

Data from VWSs also significantly support highway infrastructure planning:

- ✓ **Improving route planning:** Collecting data on the number, weight and class of vehicles using certain routes provides important insights. This information can be used to design and plan future roads or renovate existing ones to handle traffic loads more efficiently.
- ✓ **Predicting pavement wear:** WIM data, combined with traffic volume data, helps predict pavement deterioration rates. Consequently, this aids in proactive maintenance scheduling and informs the design of future roads, enhancing their durability and effectiveness.
- ✓ **Resource allocation:** The comprehensive operations data collected by VWSs, including density of traffic, types of vehicles and adherence to regulations, can guide effective allocation of enforcement resources and contribute to long-term transport policy decisions.

[Continued on next page](#)



Washington State Patrol Commercial Vehicle Enforcement.

Continued from page 9

- Traffic management:** Data from the VWS helps assess traffic patterns and congestion and provides data that the Washington State Department of Transportation (WSDOT) can use to develop long-term traffic management strategies.
- Bypass route identification:** VWS data reveals which routes are frequently used to bypass traditional weigh stations, providing the WSP and other law enforcement agencies with the information needed to curb this non-compliant behavior. As previously mentioned, WSP CVEOs and troopers can remotely log into the system from their patrol vehicles and access this information in real time. This system is not just for data collection for determining WSP enforcement strategies and resource deployment; it is also real-time information used live to intercept violators at the time of the violation.

WSDOT VWS Sites

WSDOT is continuously improving traffic safety and efficiency utilizing VWS systems. VWSs incorporate electronic screening software and roadside equipment to examine vehicles for violations while in motion. This technology has been gradually deployed in different locations across the state to aid WSP in addressing the challenges of bypassing weigh stations and ensuring CMVs are compliant with regulations.

International Road Dynamics (IRD) worked with the WSP and WSDOT to provide the VWSs with IRD's Intelligent Roadside Operations Computer (iROC) e-screening data solution that provides customized weight enforcement and CMV inspection. The iROCs exchange data with the Washington CVIEW for the Federal Motor Carrier Safety Administration (FMCSA) and SAFER data sources for vehicle identification, safety management scores, dimensional violations, operating authority credentials and fuel tax compliance. There are plans to soon integrate permit data to the iROCs via the Washington CVIEW.

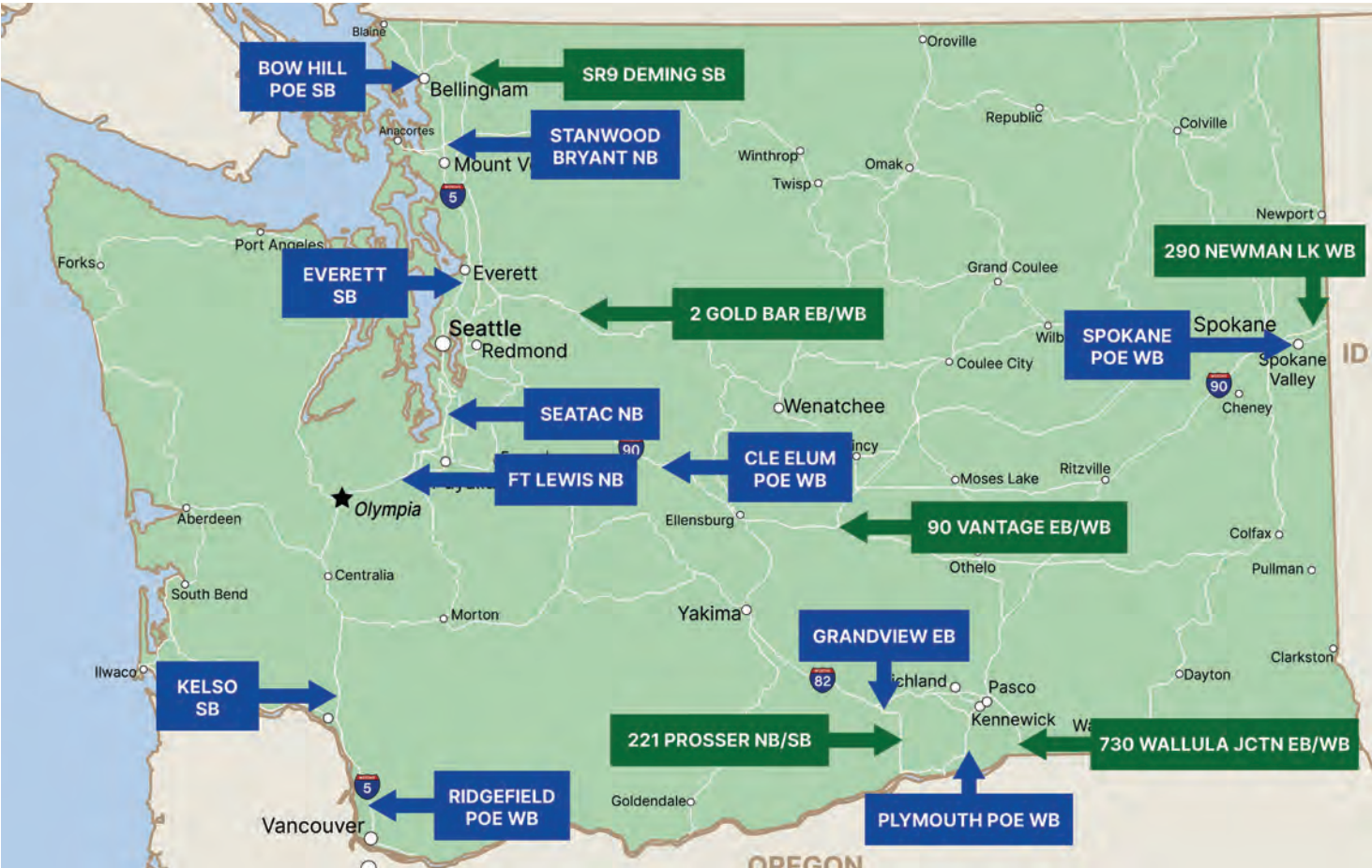
WSP Current Virtual Weigh Stations

SR-290 Newman Lake

Newman Lake is located on State Route 290 near the Idaho border. SR-290 runs parallel to Interstate 90 and is a convenient route for CMV drivers trying to bypass the I-90 Spokane weigh station. The Newman Lake VWS was implemented to monitor SR-290 for overweight vehicles avoiding enforcement. The two-lane, bi-directional site, deployed in 2016, features piezo-electric WIM sensors and basic VWS functionality via a side-view camera for eastbound and westbound CMV traffic. WSDOT and WSP are considering upgrading the site to add LPR and e-screening capabilities in the future.

I-90 Vantage

The Vantage VWS resides on I-90 near the town of Vantage and the bridge across the Columbia River. This four-lane site, deployed in 2017, is equipped with Intercomp strain gauge strip WIM sensors, providing basic VWS functionality with a side view camera for eastbound and westbound CMV traffic.



Mainline WIM Sorting Systems at weigh stations (blue) and virtual weigh stations (green) in Washington.

WSDOT and WSP hope to upgrade this site to include LPR and e-screening in the future.

SR-221 Prosser

Located on State Route 221, the SR-221 Prosser VWS is used to monitor traffic bypassing the Plymouth Interstate 82 westbound and Grandview I-82 eastbound weigh stations. Deployed in 2020, the two-lane, bi-directional site is equipped with Quartz Lineas WIM sensors by Kistler, offering full VWS functionality with LPR and side view cameras for northbound and southbound CMV traffic.

SR-730 Wallula Junction

The Wallula Junction VWS is situated on State Route 730 near the Wallula Junction weigh station, a bypass route near the Plymouth I-82 WB weigh station. Launched in 2020, this two-lane, bi-directional site features piezo-electric WIM sensors and full VWS functionality via LPR and side view cameras for eastbound and westbound CMV traffic. Both SR-221 Prosser and SR-730 Wallula Junction VWS use a shared iROC at the Union Gap facility.

SR-9 Deming

The Deming VWS is located on southbound State Route 9 near Deming. This site monitors a bypass around the Bow Hill I-5 SB and Stanwood Bryant I-5 northbound weigh stations. The two-lane, bi-directional site, deployed in 2020, includes piezo-electric WIM sensors, full VWS functionality (LPR and side view cameras) for southbound CMV traffic and basic VWS functionality (side view camera) for northbound CMV traffic. It shares an iROC with the Everett I-5 SB weigh station (used by both SR-9 Deming and US-2 Gold Bar VWS).

SR-2 Goldbar

The Goldbar VWS operates eastbound and westbound on State Route 2 near Goldbar. The VWS at this location replaces an outdated weigh station. This two-lane, bi-directional site, scheduled for deployment in 2023, is equipped with Intercomp strain gauge strip WIM sensors. It features full VWS functionality via LPR and side view cameras for eastbound and westbound CMV traffic and uses a shared iROC with the Everett I-5 SB weigh station (used by both SR-9 Deming and US-2 Gold Bar

VWS). Over the long term, implementing the VWS saves Washington state the rebuilding and maintenance costs associated with the physical weigh station.

Future WSDOT Virtual Weigh Stations

WSDOT is considering future VWS sites for the following locations:

- State Road 167 New Expressway Project – A new VWS site is under consideration.
- State Road 512 Parkland – This project aims to convert a permanent traffic recorder on SR-512 to a virtual weigh station.

Data Use Cases

There is high interest in the constructive use of the data from the VWS sites in relation to the overall enforcement program. WSDOT and WSP are considering enhancements to an existing search tool for tracking carriers with potential OOS violations to enable searching by site(s). This will enable monitoring for trends if OOS carriers are purposely bypassing the fixed facilities and taking alternate routes where there are VWSs with the relevant data available. WSDOT would work closely with WSP to roll out the changes for the search tool and provide training to WSP for the new features.

An interesting observation from the data already collected from some of the Washington state VWS sites does show a trend of a slightly higher incidence of potentially overweight vehicles when compared to the nearby fixed facility. This trend needs to be explored further.

WSDOT stores the data and images for a period of 12 months to help support audits by WSP and FMCSA.

Conclusion

Virtual weigh stations are a valuable tool for the WSP and WSDOT to enhance traffic safety, efficiency and compliance. With multiple sites implemented across the state and plans for additional sites in the future, VWS technology will continue to benefit the state for both enforcement activities and the data collected for planning operations for the state's DOT and WSP. The wealth of data collected by VWSs is instrumental to highway infrastructure planning, offering insights into traffic patterns, route planning, pavement wear prediction and more. By leveraging this data effectively, highway authorities can ensure safer, more efficient roadways and more effective infrastructure planning. ■



SR-2 Goldbar virtual weigh station.

CVSA NEWS

CVSA Hosts CMV Inspection Station Visits

One important aspect of CVSA's government affairs work is inviting U.S. Congressional staff to visit a commercial motor vehicle (CMV) inspection station. This is a great opportunity for elected officials to see a Level I Inspection firsthand, observing how inspectors do their jobs and the technology they use. While CVSA staff do a good job of briefing congressional staff on the North American Standard Inspection Program, these visits allow legislators to see it in person and gain a better understanding of all it entails. ■



CVSA Associate Members observe a Level I Inspection on an inspection station visit.



CVSA Training Coordinator Amy Molina and CVSA Manager of Government Affairs Margaret Edwards attend an inspection station visit.

Nevada Highway Patrol Updates

By Lt. Alberto Perez, Commercial Operations, Nevada Highway Patrol

Truck Driver Appreciation Week

On Sept. 13, the Nevada Highway Patrol Commercial Enforcement Section was honored to hold a truck driver appreciation barbecue in Elko, Nevada, at the Osino westbound checkpoint on I-80 to recognize and honor the vital contributions of truck drivers to our lives and economy. More than 400 truck drivers came through the checkpoint during the event, where they were greeted with a smile and thanked for their dedication and commitment. Thanks to everyone who participated and helped make this event possible.

Brake Safety Week

The Nevada Highway Patrol Commercial Enforcement Section held a 72-hour checkpoint event Aug. 22-25 in conjunction with Brake Safety Week in Elko, Nevada, at the Osino checkpoint on I-80. This operation resulted in 376 safety inspections. More than 100 out-of-service violations were documented, and unsafe vehicles and drivers were removed from Nevada roadways. ■



This photo collage, featured on their social media profiles, shows how the Nevada Highway Patrol Commercial Enforcement Section celebrated truck drivers during the 2023 National Truck Driver Appreciation Week.

UPDATES FROM Mexico

SICT Participates in CVSA Campaigns

In a concerted effort to bolster road safety and enhance cross-border trucking in Mexico, the Ministry of Infrastructure, Communications and Transportation – General Directorate of Federal Motor Transport (SICT-DGAF) has actively engaged in joint inspection campaigns alongside the U.S. and Canada. These campaigns primarily emphasize road safety protocols and the promotion of best practices.

As part of CVSA's International Roadcheck initiative, SICT inspectors inspected a total of 1,427 commercial motor vehicles (CMVs). Most of these vehicles were from general freight carriers, and 27 were found to be in violation of Mexican regulations, placing them out of service.

During the Safe Driver Week operation conducted in July, the primary objective was to scrutinize CMVs on Mexican highways, ensuring compliance with speed limits, seatbelt usage, proper lane changes, prohibited turns and adherence to rules regarding the use of mobile phones, among other behaviors.

Throughout this operation, inspectors also distributed a total of 7,668 informational flyers addressing the issue of human trafficking. They engaged with drivers across

various modes of transportation at passenger terminals and at fixed-size and weight verification centers.

Additionally, during the Brake Safety Week held in August, DGAF inspectors carried out inspections on 1,805 CMVs. Of these, 109 were ticketed, and 30 vehicles were placed out of service. Notably, among the vehicles frequently ticketed were three-axle tractor-trailers, primarily cited for violations related to brake regulations and tire conditions. ■



Training for Federal Inspectors

The SICT-DGAF has conducted comprehensive training courses aimed at federal inspectors from both the SICT and the National Guard (GN) centers, focusing on regulatory and professional development aspects.

This training initiative has benefited a total of 370 inspectors who participated in two re-evaluation courses designed for general roadway inspectors. In addition, 35 personnel from the SICT Baja California Center, affiliated with the GN, took part in professionalization activities.

Furthermore, 280 participants from the GN and SICT personnel were involved in a specialized course concerning hazardous materials and waste regulations. Additionally, 30 GN participants attended a similar course tailored to the specific needs of the Felipe Ángeles International Airport in Mexico City.

These training efforts serve to ensure that those responsible for overseeing road safety on Mexican highways are continually updated and equipped with the necessary skills to fulfill their roles effectively. ■

Regulations for Auxiliary Services to Federal Motor Transport

On May 3, SICT-DGAF introduced "Regulation of Auxiliary Services for Federal Motor Transport: Towing, Recovery and Vehicle Storage." This regulatory framework is designed to govern the operations of those holding permits for such services.

The new regulation has been published in the Official Gazette of the Federation and bears the signatures of President Andrés Manuel López Obrador, Secretary of Security and Citizen Protection Rosa Icela Rodríguez Velázquez, and Secretary of Infrastructure, Communications and Transportation Jorge Nuño Lara.

With the objective of rate regulation, it sets forth guidelines for establishing maximum fees for various maneuvers based on a rate structure. These rates are categorized according to the type of service and specific components.

Additionally, it prescribes tabulated rates for auxiliary services offered by permit holders in the towing sector. These rates are determined on a tariff basis using the measurement and update unit, and they are applied to maneuvers corresponding to the service. They consider factors such as the type of crane, distance towed and distinct service categories.

The primary aim of these regulations is to provide both users and permit holders with a clear framework that ensures transparency and predictability in their commercial activities within the sector. ■

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National Strategy for Mobility and Road Safety

The advancement of Mexico's cities hinges significantly on mobility, and as such, recent decades have witnessed substantial investments prioritizing mobility conditions to facilitate the movement of both private and industrial vehicles.

In December 2020, a reform to Article 4 of the constitution solidified "the right of all people to mobility under conditions of road safety, accessibility, efficiency, sustainability, quality, inclusion and equality." This momentous change prompted Mexican legal entities to assess the current state of the mobility system and lay the groundwork for an institutional legal framework.

Concurrently, SICT and the Ministry of Agrarian, Territorial, and Urban Development share the objective of instituting the National Strategy for Mobility and Road Safety (ENAMOV). The implementation of ENAMOV establishes the fundamental framework for fostering mobility and road safety across the country in the short, medium and long term. It delineates a vision, objectives, actions, goals, timelines, responsibilities and indicators, forming the basis for a national policy promoting the active involvement and coordination of civil, public and private sectors. Notably, it emphasizes the significance of public transportation as a pivotal element in urban cohesion and a crucial public service.

ENAMOV acknowledges the vital role played by CMVs and passenger transportation in economic development. Consequently, it positions road safety as a strategic cornerstone within the mobility system. Through its implementation

and interinstitutional collaboration, the aim is to acknowledge the right of all individuals to move freely and to access comprehensive mobility systems with adequacy and ease.

This National Strategy encompasses short, medium, and long-term initiatives organized around five strategic points:

1. Mobility integrated with territorial economic development
2. Active mobility
3. Road safety
4. Gender
5. Inclusion

It is worth highlighting that this strategy holds a nationwide scope and operates cross-functionally, encompassing areas such as infrastructure, the environment, vehicles, crashes, post-crash measures and users. Achieving its goals relies on a multifaceted approach, encompassing legislation, enforcement, technology, education and training. ■



APEC Projects

As integral components of Mexican land transportation initiatives, SICT and the Institute of Transportation of Mexico have presented two projects to Asia-Pacific Economic Cooperation (APEC) members:

1. Logistics and Intermodal Connectivity of Industrial Zones Supporting Supply Chain Connectivity for the Asia-Pacific Region:

This project aims to introduce APEC member economies to the emerging industrial zone within Mexico's Interoceanic Corridor of the Isthmus of Tehuantepec. It is envisioned as a pivotal element within APEC supply chains, facilitating connectivity between the Asia-Pacific region and this newly developed infrastructure and logistics hub.

2. Research and Workshop on Strategies and Best Practices to Reduce Trade-Related Traffic in APEC Economies Using Technology and Artificial Intelligence:

This initiative focuses on investigating successful approaches employed by APEC member economies that leverage technology and artificial intelligence to alleviate traffic congestion stemming from trade activities. The project seeks to propose a technology-based solution to address this issue, which can be adopted by all APEC economies.

These projects aspire to uncover positive trends benefiting the Mexican transportation sector while also contributing to the dissemination of international best practices. ■



TECH TALK

Advancements in Commercial Motor Vehicles and Enforcement

In the ever-evolving transportation landscape, recent years have witnessed a flurry of innovations in the commercial motor vehicle (CMV) industry and regulatory compliance enforcement. From electric propulsion systems to autonomous driving capabilities,

and from advanced enforcement data analytics to smart roadside inspections, these technological leaps are reshaping how goods are transported, businesses operate, and law enforcement jurisdictions monitor compliance and safety. Let's delve into the latest trends

and explore the impact of these innovations on efficiency, sustainability, safety, and the broader CMV and enforcement ecosystem.

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Electric trucks can reduce harmful emissions, making them an integral part of the broader push toward a greener future.



The Electric Revolution: Clean and Quiet on the Road

A defining shift in the CMV sector is the rapid adoption of electric trucks. As environmental concerns take center stage and the world shifts toward sustainable practices, major manufacturers are seizing the opportunity to revolutionize how goods are moved. Companies, such as Tesla, Rivian, Volvo and Daimler, are investing heavily in electric trucks that offer impressive range and fast-charging capabilities. This enables electric trucks to embark on journeys previously reserved for vehicles with traditional internal combustion engines.

Electric trucks can reduce harmful emissions, making them an integral part of the broader push toward a greener future. They may also incur long-term cost savings. Electric propulsion systems require fewer moving parts, leading to reduced maintenance expenses. As charging infrastructure continues to expand, the feasibility of the widespread adoption of electric trucks becomes increasingly evident.

However, electric CMVs have received some backlash. They require a larger initial investment than needed for traditional, gas-powered vehicles. Electric vehicles are more expensive, and fleet garages must be retrofitted to house, charge and maintain the vehicles properly. Heavy electric CMVs also have a shorter range than heavy traditional CMVs, which can travel as far as 2,000 miles per tank with the use of the latest aerodynamic technology. By comparison, some models of heavy electric CMVs have ranges between 150-250 miles per charge. At this time, heavy electric vehicles are equipped for regional suppliers rather than long-haul trucking.

Harnessing Data: Real-Time Insights for Safer Roads

One of the cornerstones of the CMV industry and enforcement evolution is the utilization of data-driven insights. Regulatory agencies are embracing sophisticated data analytics tools to monitor CMV operations in real time. These tools aggregate data from various sources, including electronic logging devices (ELDs), telematics systems and weigh station records. By analyzing this wealth of information, enforcement personnel can identify patterns of non-compliance, target high-risk carriers and allocate resources more effectively.

The integration of data analytics not only streamlines enforcement efforts but also enhances road safety. Timely identification of violations and potential safety risks enables agencies to take swift action, preventing crashes and fostering a culture of compliance.

Autonomous Driving: Paving the Way for Safer Roads

While fully autonomous trucks may not yet be commonplace, the industry is considering autonomous driving technologies that enhance safety and efficiency. Advanced driver assistance systems (ADAS) are becoming a standard feature in modern CMVs. These systems include adaptive cruise control, lane departure warning systems and automated emergency braking, all of which enhance road safety.

Another innovation on the horizon is platooning, where multiple trucks are digitally linked to align speed and braking, allowing them to closely follow a lead vehicle safely. This approach can reduce aerodynamic drag and boost fuel efficiency, which is especially beneficial for long-haul routes. Furthermore,



developments in artificial intelligence and sensor technology are propelling the industry toward achieving higher levels of automation in the future.

In July, Kodiak Robotics Inc. became the first company to pilot the CVSA Enhanced CMV Inspection Program, which allows autonomous trucks to pre-clear roadside inspections. Elements of this new program, designed to streamline interactions between autonomous trucks and law enforcement at fixed inspection sites, were approved by the CVSA Board of Directors in September 2022.

Enhanced inspections require a CVSA-certified industry representative of a motor carrier to conduct a thorough inspection of an autonomous truck combination, which is valid for a 24-hour period. Autonomous trucks then communicate the outcome of that inspection electronically, along with other relevant safety information, to roadside enforcement officers. Since law enforcement jurisdictions will have a high level of certainty about the roadworthiness of vehicles participating in the Enhanced CMV Inspection Program, autonomous trucks that follow the approved process will typically not be subject to routine inspections at weigh stations and other inspection sites.

Challenges related to regulatory approval and public acceptance of these technological advancements still remain. The promise of safer roads and more efficient transportation drives the pursuit of autonomous capabilities. At the same time, government and non-government entities are weighing the safety and greater impact of these advances.

Electronic Screening: Streamlining Roadside Inspections

Electronic screening, often facilitated through systems like PrePass and Drivewyze, is also revolutionizing roadside inspections. Traditionally, CMVs were (and still are) subjected to random or routine inspections at weigh/inspection stations. This process, while essential, can be time-consuming and occasionally lead to delays for compliant motor carriers.

Electronic screening and weigh-in-motion systems employ technology to evaluate a vehicle's compliance status while it's in motion, allowing compliant motor carriers to bypass weigh stations, which saves time and reduces congestion. These systems measure a vehicle's

weight and other parameters, such as axle load distribution. This approach not only enhances the efficiency of transportation operations but also enables CMV enforcement to focus their efforts on vehicles with higher-risk profiles.

One such method is CVSA's new and evolving North American Standard Level VIII Electronic Inspection, to be conducted electronically or wirelessly while the vehicle is in motion, without direct interaction with an enforcement officer. To be considered a complete Level VIII Electronic Inspection, a data exchange must include all the required and/or applicable data points in the CVSA North American Standard Level VIII Electronic Inspection definition.

This data may include a descriptive location, including GPS coordinates; electronic validation of the vehicle operator; appropriate driver's license class and endorsement(s) for the vehicle type; license status; valid Medical Examiner's and Skill Performance Evaluation certificates; current driver's record of duty status; hours-of-service compliance; U.S. Department of Transportation or National Safety Code (Canadian) number; power unit registration; operating authority; Unified Carrier Registration compliance; and federal out-of-service orders.

Seamless Connectivity: The Backbone of the Industry

Connectivity solutions are playing an increasingly pivotal role in the CMV sector. The Internet of Things has enabled real-time monitoring of vehicles, cargo and drivers. Telematics systems provide insights into vehicle performance, driver behavior and maintenance requirements. Fleet managers can leverage this data to optimize routes, track fuel consumption and proactively address maintenance needs, thereby reducing downtime and operational costs.

Furthermore, 5G technology is poised to revolutionize the industry. Its ultra-fast and low-latency communication capabilities are critical for enabling real-time communication between vehicles and infrastructure. This technology supports vehicle-to-vehicle, vehicle-to-enforcement and vehicle-to-everything communication, enhancing safety by enabling vehicles to share information about road conditions, traffic patterns, motor carrier safety and potential hazards.

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Some Thoughts on CMV Safety and Technology



By Jake Elovirta, Director of Enforcement Programs, Commercial Vehicle Safety Alliance

I was recently asked about my favorite technological advancement regarding CMV safety. To be truthful, there wasn't one specific technology that stood out in my mind. However, reflecting on this topic made me think back to Moore's law. In 1965, the late Gordon Moore made an empirical observation that the number of transistors in a microchip doubled every two years. Having proven its place in making our roadways safer, CMV safety technology is growing just as quickly. The following are some changes designed to make CMVs inherently safer over time.

Brakes have seen innovation from manual activation to an anti-lock braking system, and now the next generation of advanced driver assistance system braking technology, which includes automatic emergency braking and adaptive cruise control systems.

In my mind, logbooks are like telephones. Pen and paper logbooks, or records of duty status, are like rotary telephones (I won't even mention party lines). Automatic onboard recording devices are like push-dial phones. Electronic logging devices are like today's smart mobile devices.

In this vein, vehicle safety inspections are like logbooks. Older inspectors will remember doing inspections on three-page, no-carbon-required (NCR) 8.5" x 14" inspection reports (no, not clay tablets or papyrus; notice I didn't say ancient inspectors). Later, we moved to electronic inspections with software applications with FMCSA's very Colorado-like themes of Aspen and Blizzard. Then came third-party applications like inSPECT, TraCS and RIMS. The latest inspection software, the newly introduced FMCSA SafeSpect, utilizes agile software development principles. As software has progressed, so has access to safety information on the driver, carrier and vehicle, which allows officers and inspectors to concentrate their activities and do more with less in today's shrinking workforce.

Other promising technologies are emerging, but those are for another article.

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CVSA Staff Q&A:

Q: What is the most useful technological advancement in CMV industry and enforcement in recent history?

A: My all-time favorite advancement has been the availability of regulations and other inspection aids on apps on my phone. Granted, when they first came out, the apps weren't great. But it sure made my job easier and faster when things improved. I can easily look up an ID number or a regulation. I have so much information available at the tap of a button.



My favorite vehicle technology advancement in the last five years is the in-vehicle cameras. I know they've been around longer than that, but they weren't used like they are now. I was an investigator at a head-on CMV crash where one of the CMV drivers lost his legs. The driver of the first CMV would have been charged with vehicular assault if it weren't for the in-vehicle camera, which showed he was forced off the road by another truck. With the video footage, we were able to identify the license plate and driver of the vehicle that caused the crash.

—Shannon Heck, CVSA Director of Training Services

A: My favorite technological advancement in commercial vehicles is the development of automated driving systems. Although not fully deployed, the technology that has been developed in this area so far is astounding. A commercial vehicle has no blind spots, can see hazards well before a human driver can identify them, will not get fatigued, will not be preoccupied or distracted, and does not worry about schedules, making for a safe driver.



—John Sova, CVSA Roadside Inspection Specialist

Automated License Plate Readers: Enhancing Identification Efforts

Additionally, automated license plate readers (ALPRs) have become a critical tool in CMV enforcement. These systems use optical character recognition to quickly scan license plates and cross-reference them with databases containing information on registration, insurance and safety violations. ALPRs allow law enforcement to identify noncompliant vehicles more efficiently and accurately, facilitating targeted interventions.

ALPRs are particularly effective in identifying out-of-state or non-registered vehicles that may otherwise go unnoticed. This technology enhances enforcement efforts and contributes to leveling the playing field for motor carriers prioritizing compliance.

Mobility as a Service: Redefining Transportation Solutions

The concept of Mobility as a Service (MaaS) is reshaping the approach to transportation in the CMV sector. MaaS offers integrated, on-demand transportation solutions that optimize routes, reduce congestion and provide cost-effective alternatives for businesses. Companies are forming partnerships with MaaS providers to offer comprehensive logistics solutions that encompass not only long-haul trucking but also last-mile delivery and various aspects of the supply chain.

MaaS has the potential to transform the transportation industry through its holistic approach to solving transportation challenges. Businesses can access a range of vehicle types and services based on their specific needs,

thereby optimizing efficiency and reducing the overall environmental impact of the CMV industry. This approach aligns with the growing demand for flexible and sustainable transportation solutions in a rapidly changing world.

Challenges and Considerations: Navigating the Road Ahead

As with any technological revolution, recent innovations in CMVs and regulatory compliance enforcement come with challenges that must be addressed. Ensuring the security of connected vehicles and the data they generate is of paramount importance. Cybersecurity measures need to be robust in order to safeguard against potential threats that could compromise the safety of vehicles, enforcement databases and the information they contain. Additionally, integrating various technologies and data sources into a cohesive system poses technical challenges that require careful consideration, in industry and enforcement.

Infrastructure development also plays a crucial role. Expanding charging infrastructure for electric trucks is vital to facilitate their widespread adoption. Similarly, comprehensive 5G coverage is necessary to unlock the full potential of connectivity solutions.

Looking ahead, the future of CMV enforcement is likely to be characterized by increased integration, enhanced automation and even greater reliance on data analytics. As enforcement agencies continue to collaborate with technology providers and industry stakeholders, the efficiency and effectiveness of compliance efforts are set to reach new heights.



Future Outlook: Paving the Way for a Transformative Era

In conclusion, recent innovations in CMVs are redefining the industry's trajectory, promising cleaner, safer and more interconnected transportation systems. Electric trucks are emerging as a sustainable alternative to traditional internal combustion engines, while advances in autonomous driving technologies and connectivity solutions enhance efficiency and safety. While challenges persist, addressing cybersecurity concerns and developing necessary infrastructure will be essential in realizing the full potential of these innovations.

At the same time, the innovations in CMV enforcement are reshaping the landscape of oversight and compliance. From harnessing

the power of data analytics to streamlining inspections through electronic screening, these advancements enhance road safety, increase efficiency and foster a culture of compliance. As CMV technology continues to evolve, the industry can look forward to a future where enforcement is more effective and seamlessly integrated into the broader transportation ecosystem.

As we navigate the road ahead, the CMV industry and enforcement are poised for a transformative era that combines technological advancement with responsible and sustainable practices. The innovation-driven evolution of the industry promises economic benefits. It also sets the stage for a transportation landscape that embraces the future while ensuring the wellbeing of the people and the planet. ■

CVSA Staff Q&A:

Q: What is the most useful technological advancement in CMV industry and enforcement in recent history?

A: The most significant technological advancement in the CMV space in the last several years has got to be the realization of driver assistance and automated driving technology. We know that driver behavior, whether it's distraction or fatigue or impairment, is the leading factor in crashes. Automated technology offers a way to minimize the impact of driver behavior that has a negative impact on safety and truly save lives. Crash avoidance technologies are helping human drivers avoid crashes today, and the coming potential of automated driving systems could help us take a significant leap forward in our pursuit of zero roadway fatalities. We have some questions to answer and some kinks to work out, but the upside of figuring it all out is incredibly exciting and encouraging for the future of roadway safety.

—Adrienne Gildea, CVSA Deputy Executive Director

A: When I was born in Mexico, my dad had a fleet of a dozen tractor-truck and trailer combinations. Soon enough, I had to help the family business with maintenance and pre-trip inspections. Each and every trip, my dad was adamant about opening the service air brake chamber for a visual inspection because an intact diaphragm is essential for braking. Since then, I've had a fascination with vehicles' capability to stop. When shopping for personal vehicles, most buyers are looking for faster acceleration; I'm more interested in faster braking. Most of the time, timely braking is the vehicle feature that prevents a crash. Some of my favored CMV technologies are brake-related, including advanced brake assist, adaptive cruise control-plus with full stop, electronic brakeforce distribution and automatic emergency braking.

—Rodolfo Giacomani, CVSA Fatigue Management Specialist

A BRIEF HISTORY OF COMMERCIAL MOTOR VEHICLES

1880s-1890s: Early experimentation with steam-powered trucks and lorries begins in North America. These vehicles are modified horse-drawn carriages with steam engines.

LATE 1800s >>>

1950s-1960s: The CMV industry experiences significant expansion, driven by advances in engine technology, design and manufacturing processes.

1908: Ford introduces the Model T, a versatile and affordable vehicle that becomes popular for commercial use due to its reliability and efficiency.



1920s: The U.S. Federal Highway System is established, paving the way for more efficient long-distance transportation and promoting the growth of the industry.



1920s-1930s: The CMV industry sees rapid growth as the economy expands and improved road networks facilitate the movement of goods between cities and states.

1940s: During World War II, trucks play a pivotal role in supplying troops and delivering essential supplies to support the war effort.



<<< POST WWII ERA

1970s: Regulatory oversight increases as concerns about safety and environmental impact grow. Regulations on emissions standards, driver qualifications and weight limits are introduced to ensure responsible operation.



1980s: Digital technologies begin to emerge in the industry, including the use of computerized logistics systems and GPS navigation for improved efficiency.

INTO 21ST CENTURY >>>

THE
FUTURE
AND
BEYOND

2020s: Advancements in technology lead to the introduction of autonomous driving features and further integration of real-time tracking and optimization tools.



2010s: The focus shifts toward sustainable practices with the development of hybrid and electric CMVs aimed at reducing carbon emissions and promoting environmental responsibility.

The Alertness Equation:

How Positive Relationships Add Up

By **Rodolfo Giacoman**, *Fatigue Management Specialist, Commercial Vehicle Safety Alliance*



According to a meta-analysis of 148 studies on mortality as it relates to social relationships, with combined data from 308,849 individuals, subjects with relatively strong social relationships had a 50% higher rate of survival compared to those with few or weaker social relationships.

Another meta-analysis by the same authors found that ongoing loneliness raises a person's odds of death by 26% in any given year. According to the Harvard Study of Adult Development, people who maintain warm relationships at age 50 are the most likely to live beyond age 65. The study also found these relationships to be the single most important predictor of satisfaction at age 65. This suggests that positive relationships not only contribute to our physical health but also to our mental and emotional well-being.

That is why CVSA conducted a Nurturing Positive Relationships webinar in July, as part of the North American Fatigue Management Program (NAFMP) Driver Series. The series covers the five keys to wellness:

1. Sleep hygiene
2. Exercise
3. Nutrition
4. Mindfulness
5. Positive relationships

For the sleep hygiene webinar, our featured speaker was Tom DiSalvi, vice chairman of the National Sleep Foundation board of directors, and Schneider National's vice president of safety, driver training and compliance. For the webinar on exercise, our featured speaker was Dr. Mark Manera, founder and chief executive officer of Supply Chain Fitness.

For the nutrition webinar, instead of having a featured speaker, we took a virtual tour through truck-stop restaurant menus and a supermarket. For the mindfulness webinar, our featured speaker was Emily Moorhead, 200-hour certified yoga teacher and CVSA writer-editor. For the webinar on positive relationships, we were fortunate to have a guest who excels at nurturing interpersonal connections: Ruth McDonough, specialized cargo driver at Hittman Transport Services and CVSA 2022 International Driver Excellence Award winner.

Right off the bat, McDonough taught us a lesson. When we invited her to do the webinar remotely — as we usually do — she replied, “You want to talk about nurturing personal relationships? Then let's do it face to face.” She drove more than six hours from her home in Tennessee to our headquarters in Washington, D.C., where we had a delightful conversation and a wonderful visit. Read on for a summary of our discussion, and be sure to view the webinar at www.nafmp.org to hear from McDonough herself.

What are positive relationships?

Positive relationships are characterized by mutual respect, trust, support and cooperation. Both parties feel valued, understood and appreciated. They involve people who communicate effectively, listen attentively to each other's needs and concerns, and strive to find common ground and resolve conflicts in a constructive manner.

How do positive relationships add up for commercial drivers?

- ✓ **Improved health:** Individuals with strong social connections and supportive relationships tend to have lower risks of developing chronic diseases, such as heart disease, stroke and diabetes. They also have lower rates of depression, anxiety and other mental health disorders.
- ✓ **Reduced stress:** Positive relationships can serve as stress regulators, helping drivers cope with the challenges of their job. Social support can also buffer the effects of stress, reducing the risk of stress-related negative health outcomes and improving mental health.
- ✓ **Enhanced alertness:** When drivers feel supported and valued, they are more likely to be mentally alert and focused. This can lead to improved safety and performance on the road.

INSPIRING TESTAMENTS ON FIVE KEYS TO WELLNESS

A few weeks ago, while watching Dan Buettner's Netflix docuseries, "Live to 100: Secrets of the Blue Zones," I couldn't help but realize the impact of the NAFMP's Five Keys to Wellness – sleep hygiene, exercise, nutrition, mindfulness and positive relationships. These habits are embraced by those residing in the renowned Blue Zones, areas where a high percentage of the population live longer than average, and have had a remarkable effect on individuals I know who have enjoyed long, fulfilling lives.

In thinking of long lives well-lived, my thoughts naturally turn to my mom. For decades, I never considered her particularly healthy; the opposite seemed true. She faced many health challenges, including thyroid and rheumatic disorders, a benign brain tumor that required two surgeries, breast cancer and obesity. Despite these, she lived a joyous and active life for 96 years, only losing her ability to walk in her final two months. Remarkably, she never stopped having a great sense of humor.

While arthritis pain-induced sleep disturbances were a constant companion, she

followed a regular sleep schedule and took naps when needed, demonstrating exemplary **sleep hygiene** (key #1). While never on a diet, she consumed minimally processed, homemade meals, prioritizing **nutritious eating** (key #2). Although she never set foot in a gym or engaged in organized sports, her daily activities, which included managing a household and raising eight children, ensured she remained **physically active** (key #3). She also dedicated at least an hour to reflection and prayer each day, embodying **mindfulness** (key #4). Perhaps most importantly, she nurtured her extensive network of family, friends and church community every day, exemplifying the power of **positive relationships** (key #5).

CVSA would be delighted to read and, with your permission, share, your stories about individuals who have enjoyed long and fulfilling lives, especially those who did so by embracing (or not) any of the Five Keys to Wellness. Please send your narratives to rodolfo.giacoman@cvsa.org. Your stories will help inspire and enlighten others on the path to a healthier, more alert and fulfilling life.

- ✔ **Increased motivation:** Positive relationships can provide a sense of purpose and motivation, which can help drivers stay engaged in their work and achieve their goals.
- ✔ **Improved job satisfaction:** Commercial drivers with strong relationships with their colleagues and supervisors are more likely to be satisfied with their jobs and less likely to experience burnout.

What can drivers do to nurture positive relationships?

- ✔ **Make time for your relationships:** Even with a busy schedule, it's important to set aside time for the people you care about. Make an effort to connect with them regularly, whether it's through phone calls, video chats or in-person visits.
- ✔ **Be open and honest:** Communication is key in any relationship. Be open and honest with your loved ones about your thoughts, feelings and needs. This will help them to understand and support you better.
- ✔ **Be supportive:** Offer emotional, practical and motivational support to your loved ones. Celebrate their successes and be there for them during difficult times.
- ✔ **Be respectful:** Treat your loved ones with respect, even when you disagree with them. Value their opinions, boundaries and individuality.

- ✔ **Resolve conflicts constructively:** When conflicts arise, it's important to resolve them in a respectful and constructive manner. Avoid personal attacks and focus on finding solutions that work for everyone involved.

What can motor carriers do to nurture positive relationships?

- ✔ **Create a positive work environment:** Motor carriers can create a positive work environment by fostering a culture of respect, trust and support. This includes providing fair compensation and benefits, training and development opportunities, and a safe work environment.
- ✔ **Encourage communication:** Motor carriers can encourage communication by providing employees with opportunities to share their feedback and suggestions. They can also establish regular check-ins with employees to discuss their goals and needs.
- ✔ **Support drivers' well-being:** Motor carriers can support drivers' well-being by offering employee assistance programs, which provide free, confidential counseling and support services. They can also offer wellness programs and other resources to help drivers stay healthy and manage stress.



LEARN MORE:

Social Relationships and Mortality Risk: A Meta-analytic Review

www.ncbi.nlm.nih.gov/pmc/articles/PMC2910600/

Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review

<https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=3024&context=facpub>

Harvard Study of Adult Development

www.theatlantic.com/ideas/archive/2023/01/harvard-happiness-study-relationships/672753/

» The Blue Zones®

The Blue Zones are regions where people live longer and healthier than average, often well into their 100s. Dan Buettner identifies five known Blue Zones in his book on the subject. Read more here:

www.bluezones.com/about/history/

Tips for Building and Maintaining Positive Relationships in the CMV Industry

- ✔ **Get involved in the community:** Joining a truck club or participating in other industry events is a great way to meet other drivers and build relationships.
- ✔ **Use social media:** Social media can be a great way to stay connected with friends and family as you travel, as well as other drivers. There are also many online support groups and forums for commercial drivers.
- ✔ **Be a mentor:** If you have experience in the industry, consider mentoring a new driver. This is a great way to give back to the community and build a positive relationship with another driver.
- ✔ **Take care of yourself:** It's important to take care of yourself physically and mentally to maintain positive relationships. Make sure to practice good sleep hygiene, eat nutritiously, move regularly and practice mindfulness.

By nurturing positive relationships, drivers may reduce stress, improve their health and enhance their performance on the road. For motor carriers, creating a positive work environment that encourages positive relationships can lead to employees that are safer, more motivated and healthier. Companies should never subtract activities that promote positive relationships from their fatigue management equation. ■

AutoZone Driver Wayne Hayes Receives the 2023 International Driver Excellence Award



Wayne Hayes gives his remarks during the award ceremony.

Hundreds of CVSA industry and enforcement members rose to their feet to give a standing ovation to this year's International Driver Excellence Award (IDEA) winner professional driver Henry "Wayne" Hayes, of AutoZone, as he approached the stage to accept his award at the 2023 CVSA Annual Conference and Exhibition in Grapevine, Texas.

At the Sept. 20 awards luncheon, Hayes thanked his support team at AutoZone, his friends (some of whom attended the awards luncheon to support him), his kids and his wife, Tammy, who looked on proudly as Wayne gave his remarks.

"What keeps me safe out there more than anything obviously is the support of my team and my family," said Hayes at the awards

luncheon. "Without them, I couldn't do what I do."

"If you've got patience, you'll be safe," he added.

Hayes got a bit choked up when he talked about the importance of roadway safety and how he always thinks of "those kiddos in the backseats" when he's behind the wheel of his truck.

He wrapped up his remarks humbly with, "I just want to say, thank y'all, and I appreciate y'all."

Back on Aug. 29, CVSA made the big announcement that Hayes was selected as this year's International Driver Excellence Award winner. Hayes has driven 4.1 million safe miles during his 38-year professional driving career. He is an AutoZone regional driver who carefully navigates tight loading docks and parking lots in business districts to safely deliver auto parts to company stores. He drives, on average, hundreds of miles per day, thousands of miles a week, making deliveries in the southeast region. Hayes has made thousands of store deliveries without ever having a preventable collision, safety violation or even a speeding ticket.

"It is such an honor to receive CVSA's International Driver Excellence Award," said Hayes. "I realize there are many deserving drivers out there with great career records – drivers who prove their excellence in safety each and every day out on the road. I was honored to be a nominee and truly overwhelmed to be the recipient of this year's award."

Hayes added, "This means so much to me and my family. What an honor it is, and I am truly grateful and humbled for this opportunity."

Hayes began his career 38 years ago when he went to work for Turner Dairy Company hauling milk and ice cream. This is where he received the driving handle, "Milkman." Ten years later, in 1994, Hayes joined AutoZone, where he has been ever since, achieving more than 3 million safe-driving miles hauling auto parts to stores.

"On behalf of the Alliance, I'd like to congratulate Wayne for his outstanding and impressive safety record," said 2023 CVSA President Maj. Chris Nordloh of the Texas Department of Public Safety. "This award, CVSA's only driver-excellence award, is our way of acknowledging the crucial role drivers play in keeping our roadways safe. CVSA bestows its prestigious International Driver Excellence Award to one exceptional commercial motor vehicle driver each year. Wayne not only met, but far exceeded, the award's difficult and exclusive criteria."

CVSA's International Driver Excellence Award isn't the only award Hayes has received during his professional driving career. In 2021, Hayes was nominated and inducted into the Driver Hall of Fame, AutoZone's first-ever driver to be honored by the National Private Truck Council.

In 2020, he was the inaugural AutoZone truck driver to log more than 3 million safe miles, and in 2021, Hayes received AutoZone's Driver of



Hayes holds the IDEA trophy (center). From left to right: 2023 CVSA President Maj. Chris Nordloh of Texas Department of Public Safety (DPS); CVSA IDEA Program Chair Paul Claunch of PrePass Safety Alliance; AutoZone Distribution Center Transportation Operations Manager, Customer Satisfaction, Stephanie Williams, who nominated him for the award; Wayne Hayes and his wife Tammy; PrePass Safety Alliance board member Capt. Omar Villarreal of Texas DPS; and CVSA Executive Director Collin Mooney. PrePass Safety Alliance was this year's award sponsor.

the Year Award. He has also received numerous Extra Miller Awards for going above and beyond routine tasks, and he has a perfect attendance record for the 29 years he has been with AutoZone.

"Safety is very important to me," said Hayes. "I try to always keep safety at the top of every action I take as a driver. I drive expecting the unexpected. I always anticipate what the motoring public will do when I pass alongside them or meet them in a parking lot. It's not easy, but you have to look out for yourself and those around you."

When asked what he enjoys most about his profession, Hayes said he enjoys traveling and meeting new people. He adds, "I like interactions with new and fellow AutoZoners that I meet and work with in our stores. I also like the close-knit, family-oriented relationships with my co-drivers that have been built throughout the years."

"Wayne is a defensive driver, and he keeps his head on a swivel," said AutoZone Distribution Center Transportation Operations Manager, Customer Satisfaction, Stephania Williams, who nominated Hayes for IDEA. "He drives anticipating what the other drivers might do and says that when he sees all the kiddos when he's driving on the highways, it makes him stop and think about safety first."

"Wayne comes to work every day with a great attitude and his mind set on safety," added Williams.

The feeling is mutual between AutoZone and Hayes. "My AutoZone team has helped me along the way to keep safety at the forefront," said Hayes. "AutoZone has provided safe equipment to drive; tools, such as site surveys and store directions; safety topics and reminders for drivers; and safe co-drivers. All of this helps me put safety first when I'm out on the road."

With nearly 40 years of professional driving experience, Hayes has many valuable safety tips for his fellow drivers. "Always do a good inspection before you leave," said Hayes. "Be prepared, know your route and what to expect, and watch out for yourself and others."

Like many professional commercial drivers, Hayes' successful career would not have been possible without the support of his loved ones at home. "I would like to thank and acknowledge my wife, Tammy," said Hayes. "She has been my biggest supporter. If you are a driver, you are going to spend time away from home, which is the unfortunate part of this career. Tammy has always kept our home life working while I was out on the road. That isn't an easy task. There are lots of responsibilities – raising kids, running the family business, keeping the home. But she has held it together all these years, and I am very fortunate to have her and a loving family supporting me."

In addition to his impressive trucking career, Wayne and his wife own and operate a

produce market, and it's a family affair. His daughter, Ginger, works at the store and his son, John Henry, is a driver for the company. In addition, the Hayes family donates food to their local community food bank and Wayne volunteers at his church where he takes care of the church cemetery.

During his time off, Hayes enjoys spending quality time with his family and other loved ones, fishing with his grandkids, and helping at his family-owned and operated produce market. "That is what I look forward to when I come home – family," said Hayes.

This year's and next year's International Driver Excellence Award are sponsored by PrePass Safety Alliance. PrePass Safety Alliance brings together state and motor carrier industry decision-makers to advance safety and efficiency on our highways. PrePass Safety Alliance's mission is to make highways safer and more efficient through innovative data-driven solutions.

Nominations for the 2024 award will open in spring 2024. ■



Hayes accepts the International Driver Excellence Award at the 2023 CVSA Annual Conference and Exhibition in Grapevine, Texas.

CVSA Roadside Inspection Specialist John Sova Receives Excellence in Public Service Award

In September, CVSA Roadside Inspection Specialist John Sova received the Excellence in Public Service Award from the North Dakota Motor Carriers Association at its annual awards ceremony in Bismark. Sova worked as a trooper with the North Dakota Highway Patrol (NDHP) for 21 years before retiring and joining the CVSA team.

The awards ceremony was part of the organization's annual convention, which focused on safety and changes the trucking industry is facing. The Excellence in Public Service Award recognizes an outstanding public employee whose work and collaboration with the industry helps further safety, compliance and understanding of complex regulations.

Sova was accompanied to the awards ceremony by his wife Connie, daughter Cassidy, and parents Jerome and Patricia, and he expressed his appreciation for the support they have given him over the years.

"I am humbled and honored to receive this award. I always valued and emphasized the cooperative effort between industry and enforcement," said Sova. "Enforcement takes place after an unsafe act has already occurred; I have always looked for ways to keep the unsafe act from happening. I believe partnerships with industry improve safety, whether it is conducting training or simply being a resource to motor carrier safety officials and drivers. When the motor carrier believes in safety and has the knowledge and resources to build the safety culture, the motor carrier is safer, and ultimately the roads that all our families travel on are safer too."

Sova, who has a bachelor's degree in business administration and management information science from the University of Jamestown, was looking for a career change in the early 2000s when his father advised him to join NDHP.

"The NDHP puts you through the academy after you are hired, so I applied. I spent 21 years with the patrol in commercial motor vehicle (CMV) enforcement positions. My first five years were spent as a size and weight enforcement trooper where I split my time between that, traffic enforcement and CMV inspections," said Sova.

For the next 16 years, Sova served in a Motor Carrier Safety Assistance Program (MCSAP) trooper role, with the last five as a MCSAP coordinator, where he conducted roadside inspections, compliance reviews for the Federal Motor Carrier Safety Administration

(FMCSA) and traffic enforcement. Sova held certifications in safety investigations, roadside inspections and hazardous materials, and served as an associate staff instructor for FMCSA's National Training Center.

"Whether it was a traffic stop, compliance review, training seminar, public speaking event, phone call from a driver or motor carrier or fellow trooper with questions, I always tried to make myself, and knowledge of the regulations, available," said Sova. "I endeavored to make myself better so I could have the answer to the difficult questions. My goal was to answer questions completely by providing information on what was needed to stay in compliance with the safety regulations. There were times I provided way more information than was desired, but I always wanted to make sure any future noncompliance was not due to an incomplete answer from me."

When asked about a favorite memory from his time at NDHP, Sova recalled a time that exemplified the CVSA goal of realizing the synergy between CMV enforcement/government agencies and the motor carrier industry. "I was set up doing Level I Inspections at a rest area outside of Jamestown, North Dakota. A truck/trailer combination came into the rest area, and I waived him in for inspection. The inspection immediately went off the rails when I approached the driver. He was extremely upset about being pulled in for an inspection and he was already running behind. I heard that a lot, and understand the drivers are on time schedules, but had never seen anything like this. I continued with the inspection, treating the driver with respect and trying to complete it as quickly as possible so I could get him on his way. As the inspection progressed, the driver's anger subsided, along with the tension. By the end of the inspection, the driver was pleasant and ended up staying for another 30 minutes after the completion of the inspection, asking questions. It is always a good day if you can improve the relationship between enforcement and industry and provide answers to help the driver and/or carrier improve their safety operation."

Sova was involved with CVSA during his time in enforcement as a member and leader. Throughout his NDHP career, he was a member of the Electronic Inspection Ad Hoc Committee (which is now the Enforcement and Industry Modernization (EIM) Committee) and served in several leadership positions: chair of the Vehicle Committee for six and a half years, vice chair of the Automated Driving System (ADS) Work Group for four years and chair of the Level VIII Electronic Inspection Ad Hoc Committee.

Sova also received the North American Inspectors Championship Jimmy K. Ammons Grand Champion award in 2011.

Sova's work with enforcement continues as CVSA roadside inspection specialist. "I am the staff liaison for the EIM committee, allowing me to continue working with the CVSA Enhanced CMV Inspection Program for automated driving system vehicles and the development of the Level VIII Electronic Inspection. I also get to continue working with the roadside inspection programs. My activities at CVSA allow me to collaborate with roadside enforcement personnel and the members of industry. I may have switched employers, but my focus remains on improving highway safety by improving safety programs and helping to further compliance and the understanding of complex regulations.

"I am grateful that my career with NDHP allowed me to get involved with CVSA," Sova concluded. "This involvement allowed me to build my knowledge and understanding of regulations and roadside inspection processes. It gave me the opportunity to build friendships across North America that I could turn to when I didn't have the answer." ■



Sova, daughter Cassidy and wife Connie.



Paul Gibree (North Dakota Motor Carriers Association Board of Directors) and Sova.



INSPECTOR'S CORNER

There's Always Room for Self-Improvement

By **Tomasz Krolak**, Minnesota State Patrol; North American Inspectors Championship Jimmy K. Ammons Grand Champion

Regardless of rank, title or position within our organizations, we all can stand to benefit from periodic self-reflection. An honest evaluation of our performance following an inspection or upon the completion of our shift is a challenging and time-consuming process; however, it is necessary, and it allows us to better understand our strengths and weaknesses as inspectors. Some of us may have a knack for identifying hours-of-service violations or spotting underinflated tires on moving vehicles, but what does it all mean if we can't figure out how to document those violations on our inspection reports properly?

Until we recognize, acknowledge and do something about our weaknesses, we will continue to make mistakes that solidify our positions as mediocre inspectors.

By no stretch of the imagination am I an omniscient inspector. Certainly, there are some things I don't completely understand and other things I struggle to grasp. Evaluating my performance allows me to identify my shortcomings as an inspector, and my desire for self-improvement pushes me to do something about it.

In recent years, I completed a self-assessment of my understanding of hydraulic brake systems. I quickly came to realize I didn't know enough about them. Even though I had attended training sessions that described each system and watched CVSA videos, I still struggled to properly identify the different hydraulic systems and the processes for checking them. At this point, I decided to learn more about each hydraulic brake system to become a better inspector.

Using information from previous courses and advice from senior inspectors, I began putting together quick reference sheets for each system. The reference sheets included a picture of the system, a basic diagram, a list of things to check and procedures to follow. These reference sheets allowed me to quickly identify the hydraulic brake system and the procedures that would ensure the system was working properly.

Creating these documents allowed me to better understand something I previously had



a loose grasp on. I am now a better inspector because I recognized, acknowledged and did something about my weakness. My improved understanding of the different systems and the reference sheets I created not only help me roadside, but are also useful for other inspectors struggling to understand these brake systems.

Even though my understanding of hydraulic brake systems has improved drastically, I still believe there is always room for improvement. With each inspection I complete and every violation I discover, I gain a deeper understanding of the brake system and how it operates. This continual improvement is a process each of us could follow. It allows us to incrementally improve our performance in problem areas by identifying and analyzing our weaknesses. The process may not turn

ordinary inspectors into rockstars overnight, but it's a starting point.

I challenge you to identify one aspect of your daily routine that you struggle with or don't completely understand. Once identified, figure out a plan to improve your weakness by utilizing the people and resources available to you. With a little courage, discipline and time, you will slowly become a master of your weakness and a role model for new inspectors to emulate. ■



THE LEGISLATIVE AND REGULATORY RUNDOWN

By **Adrienne Gildea**, CAE, Deputy Executive Director, Commercial Vehicle Safety Alliance

Looking Ahead to 2024

It was a busy fall for CVSA staff coming out of the 2023 Annual Conference and Exhibition in Grapevine, Texas. CVSA staff members have been busy drafting letters and petitions on everything from brake regulations to the requirement that motor carriers return inspection reports certifying the issues have been corrected. Staff also worked with our various committees to file comments in response to several requests for comments from the Federal Motor Carrier Safety Administration and the Pipeline and Hazardous Materials Safety Administration, as well as responding to the National Transportation Safety Board regarding open recommendations to the Alliance.

In addition, CVSA Manager of Government Affairs Margaret Edwards has continued her outreach on Capitol Hill, working to raise the Alliance's profile and recognition among members of the U.S. Congress and their staff. Her efforts were also spent educating offices about two of CVSA's top legislative priorities: better defining "personal conveyance" and establishing a requirement that all commercial motor vehicles be equipped with a universal electronic identifier.

With 2023 coming to a close, attention among transportation policy professionals turns to

the elections in 2024. As noted in this article in the previous edition of *Guardian*, the U.S. Department of Transportation (DOT) was very busy over the summer and fall, publishing a number of critical rulemakings, including proposals on speed limiters, safety fitness determination changes, automatic emergency braking systems and underride protection. A tremendous amount of progress has been made in the commercial motor vehicle safety policy space over the last 18 months. Unfortunately, most of those rulemakings are in their preliminary stages, either as proposed rules or even advance notices prior to the actual proposed rule.

Many in Washington, D.C., are wondering how the coming election cycle will impact the U.S. DOT's progress on these and other important regulatory actions, including responses to CVSA's petitions. Historically, overall regulatory action slows down in an election year, particularly in a presidential election year, and work stalls on significant rulemakings that could be seen as controversial. In some instances, even smaller items that have general support can be put on hold until the election is complete. There is time in the first half of 2024 for U.S. DOT to finalize their various rules, but as November approaches, that window will close, and these important initiatives will

be put on hold until after the elections. They could be further delayed if there is a change in administrations, as the new president will need to appoint leadership at the department and evaluate all open rulemakings to determine how they align with their administration's policies and priorities.

As noted in previous editions of this column, work is underway developing the Alliance's next set of legislative priorities. The Reauthorization Task Force continued its work into the fall, meeting several times to discuss issues facing the commercial motor vehicle inspector and safety community.

CVSA also sent a survey out to all its members, asking questions on a variety of issues to help gather input for the Reauthorization Task Force. In early 2024, the task force will meet with other industry stakeholders to hear about their priorities and get further input. The group will use that meeting, as well as the feedback from the survey, to begin to craft recommendations for the Policy and Regulatory Affairs Committee to consider in the coming months. Items approved by the committee will then be considered by the board of directors. ■



The colors are posted during the opening ceremony of the CVSA Annual Conference and Exhibition in Grapevine, Texas, where members gathered together to affect meaningful changes to timely issues and the overall culture of transportation safety throughout Canada, Mexico and the United States.



FMCSA Announces More Than \$80 Million in Grants to Improve Highway Safety, Including Better Access to Truck Parking

The U.S. Department of Transportation's (DOT) Federal Motor Carrier Safety Administration (FMCSA) announced more than \$80 million in grant awards from U.S. President Biden's Bipartisan Infrastructure Law. This funding will help reduce the frequency and severity of commercial motor vehicle (CMV) crashes on U.S. roadways and support truck drivers by expanding access to truck parking, investing in critical technology, improving safety in work zones, rural areas and high crash corridors, and more. Grant recipients include states, local governments, non-profit organizations and academic institutions across the country.

The High Priority grants include a 65% increase in funding for truck parking projects over last year and enhance critical efforts to support truck drivers and improve safety such as:

- Expand access to truck parking by helping truck drivers locate available rest area truck parking spaces in real time via dynamic message signs along highways in Kentucky, Delaware and Indiana.
- Research to support automated, location-based driver alerts via electronic logging devices that inform drivers of upcoming work zones, improving safety for both the drivers and the workers.
- Enhancement of electronic screening technologies to detect vehicle violations (such

as automated license plate readers, U.S. DOT number readers, tire monitoring systems and hazardous materials placard readers).

- Outreach and education to combat human trafficking, an effort in which truck drivers can play a key role given their time and attention on the road.

"We depend on truck drivers every day, and we have a national responsibility to support their safety and job quality," said U.S. Transportation Secretary Pete Buttigieg. "We are proud to deliver new funding that will improve safety on our nation's roads."

"President Biden's historic investment through the Bipartisan Infrastructure Law helps improve commercial motor vehicle safety on our roadways both at the national and local levels," said FMCSA Administrator Robin Hutcheson. "Our grantees will dedicate these investments to innovative technology, research and other projects that will positively impact CMV safety and move us toward the National Roadway Safety Strategy's goal of zero deaths on our nation's roadways."

This builds on the Biden Administration's continued investment in truck parking and safety on our nation's roadways, which includes more than \$80 million invested in new truck parking spaces across the country.

- ✓ **Caldwell County, Texas:** \$22.9 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant to design and construct a truck parking plaza that improves safety and convenience for truck drivers. The plaza will include short- and long-term spaces with lighting, fencing, restroom and shower facilities, with 24-hour monitored security.
- ✓ **Caldwell Parish, Louisiana:** \$10.5 million RAISE grant to buy land and build a truck parking facility near the port and a highway for 50 commercial trucks, 100 cars and electric vehicle (EV) charging stations that are designed to provide auxiliary power units to power a truck cab's heating and cooling, without having to run the engine while also recharging trucks. There will also be a system to find parking spaces in real-time.
- ✓ **I-4 Between Tampa and Orlando, Florida:** \$15 million Infrastructure For Rebuilding America (INFRA) grant for a new truck parking facility with approximately 120 spaces, EV charging stations and pedestrian infrastructure to access nearby commercial amenities.
- ✓ **Near Memphis, Tennessee:** \$22 million INFRA grant adds 125 truck parking spaces at a spot along I-40, a critical freight corridor. The project will also upgrade adjacent bridge structures. ■



FROM THE DRIVER'S SEAT

Plan For a Safer Trip

By **Bob Bramwell**, Professional Driver, ABF Freight; America's Road Team Captain

Remember when you began driving? Most posted speed limits topped out at 55 mph when I first got on the road. If you were taking a road trip during the summer, you had an atlas, spare tire, jack, tools, an extra quart of motor oil, a jug of water and most likely had the windows down, enjoying the warm summer breeze. Now imagine learning to drive on today's highways as a teenager, contending with the challenges and conveniences of modern life.

My daughter recently obtained her learner's permit, and we've been hitting the highways together. Very soon, she will be taking the exam to receive her driver's license. I think back to when I started driving. You really had to be prepared for all scenarios – or at least have some good walking shoes. Where I live in Missouri, you might have a good distance before you reach the next available help. When I was younger, you either had no cell phone if you needed to call for help or, if you did, you most likely would not have a signal.

Another difference is this: Many drivers today have no idea what an atlas is. As professional drivers, we take for granted things such as which direction we're facing or need to

go – north, east, south or west. The nation's highways and interstate systems are numbered to distinguish which way of travel the highway goes through the United States. Now, an atlas is replaced by a GPS app on your phone. It is such a great tool. Everyone has used their phone for directions, but there is no reason why it can't be utilized the same way as an atlas or that you shouldn't keep both handy. An atlas will never crash, will always be fully loaded and cannot lose battery.

For all the modern conveniences, what I viewed as challenges as a new driver are nothing compared to what today's youth face when learning how to drive. Highways have changed. The two-lane roads have turned into divided highways. Interstates now contain three lanes of travel to allow more vehicles. The speed limits are higher. While there have always been distractions, today's added distractions on the road compound the chances of being involved in an accident.

Even with a whole different set of challenges, in many ways, today's young drivers and the precautions they should take are the same. Here are some things taught to the young

drivers of my day that are still shared with new drivers today:

- ✳ Be prepared for seasonal conditions.
- 👤 Know and plan your route.
- 🛠 Have an emergency kit in the vehicle (blankets, water, shovel, flares, etc.).
- 🚗 Know how to change a flat tire.

We covered these tips with my daughter this summer, but as we move into winter weather, we have shifted to teaching her how to prepare her vehicle for the changing conditions.

I am trying to teach my daughter to develop correct driving habits. This is important for her safety and the safety of everyone around her while on our highways.

Look around you while traveling down the nation's highways today; it seems everyone is holding their phone in their hand, creating a needless distraction. Like I tell my daughter, make a commitment to yourself and your loved ones not to allow a cell phone to distract you. Your family or someone else's could be affected. No matter how long you've been driving, put the phone down, pull out an atlas and enjoy safe travels. ■



***An atlas will never crash,
will always be fully loaded
and cannot lose battery***



Bringing Safety Research Results into Operations

By **Dave Elniski**, BSc, CTSP, CRSP, ATCL, Industry Advisor in Safety and Compliance, Alberta Motor Transport Association

It is truly incredible how much work is done around the world in transportation safety research. There are groups dedicated to the safety of truck and bus drivers and those who share the road with them, such as the Transportation Research Board Committee on Truck and Bus Safety¹, a committee which brings together international researchers on this topic. However, from a mainstream industry perspective, much of this work is done in relative obscurity.

Safety research results often do not make front-page industry news unless related to timely compliance topics or major technological advancements and, even then, are generally described for the sake of interest, not in terms of how fleet safety managers can implement findings into their regular operations. Additionally, published research results are written with academics and other researchers in mind, making them challenging to read and even access for those outside of the research community.

So, the question is: how can the trucking and busing industries benefit from safety research? Do we have to wait for regulators to incorporate research results into regulations? Fortunately, there are positive answers to these questions. Organizations exist that do the work of moving the results of safety research into actionable practices that fleets can put into use. So, once a carrier has implemented a compliant safety program, they can then continually work to improve their practices based on the latest research. Here are some examples.

The North American Fatigue Management Program (NAFMP), which came under the care of CVSA in December 2021, is a freely accessible driver wellness program meant to educate carriers on best practices for reducing risk from driver fatigue². This program is the result of decades of research into human fatigue and fleet safety management best practices. It began in the early 2000s as a cross-border initiative to educate North American carriers on the importance of doing more than just maintaining hours-of-service compliance to manage fatigue. By accessing this program, carriers can take advantage of safety research results that are intentionally presented in an easily implementable way.

The National Institute for Occupational Health and Safety (NIOSH) is part of the U.S. Centers for Disease Control and Prevention and is tasked with researching and promoting workplace safety in all industries in the U.S. NIOSH has its **Center for Motor Vehicle Safety**, which houses plenty of resources meant to help employers manage risks related to commercial driving³. NIOSH has resources meant to help truck and bus carriers, as well as any employer who uses vehicles as part of their operations. This is of special value to carriers who are interested in addressing safety issues related to their lighter vehicles, like service trucks and even passenger cars used by office staff.

In Canada, the **Canadian Centre for Occupational Health and Safety (CCOHS)** is the closest equivalent to NIOSH. CCOHS offers driver resources not just for the safety of other road users and preventing crashes, but also

for the safety and wellbeing of the commercial drivers themselves⁴. CCOHS regularly updates its resources in response to research findings, best practices and Canadian occupational health and safety legislation.

As you can see, there are multiple avenues to access the practical results of transportation safety research in ways that are applicable to fleet safety management. The listed organizations are not the only ones that do the work of bringing safety research findings to industry members. I encourage fleet safety professionals to take some time to see what is out there, so that they can move beyond compliance-only safety practices and take advantage of the efforts of safety researchers around the world. Feel free to contact me at dave.elniski@amta.ca for more information in this area. After all, trucking industry safety associations are another resource standing by to help carriers improve their safety outcomes. ■

¹ Transportation Research Board. "Truck and Bus Safety (ACS60)." Accessed September 22nd, 2023, from www.ugpti.org/trb/truckandbus/committee.php

² North American Fatigue Management Program. "About NAFMP." Accessed September 22nd, 2023, from www.nafmp.org/about-nafmp/

³ National Institute for Occupational Safety and Health. "Motor Vehicle Safety at Work." Accessed September 22nd, 2023, from www.cdc.gov/niosh/motorvehicle/

⁴ Canadian Centre for Occupational Health and Safety. "Driving and Ergonomics." Accessed September 22nd, 2023, from www.ccohs.ca/oshanswers/ergonomics/driving.html

Hazardous Materials Training: A Broader Issue Than You May Think

By **Kenny Ray**, CSP, CHMM, Vice President, Safety and Risk Consulting, Cline Wood/Marsh MMA

Thousands of hazardous material (hazmat) shipments are transported safely across North American highways each year. Depending on the type and amount of the material being shipped, those hazmat shipments are regulated by many federal agencies, including Occupational Safety and Health Administration, Environmental Protection Agency, Department of Homeland Security, United States Coast Guard and U.S. Department of Transportation (DOT). Additional agencies in Mexico and Canada regulate hazmat shipments in those countries.

Within the U.S., multiple state agencies exercise additional regulatory control over the transportation of hazmat. For example, hazmat shipments within Texas are regulated by the Texas Department of Public Safety, Texas Department of Transportation and Texas Commission on Environmental Quality. There is no shortage of federal, state and local agencies prepared to enforce the complex – and often misunderstood – hazardous materials regulations.

The U.S. DOT (49 Code of Federal Regulation (CFR) 171.8) specifically defines hazmat as “a substance or material that the secretary of transportation has determined is capable of posing an unreasonable risk to health, safety and property when transported in commerce.”

There are five modes of hazmat transportation – highway, rail, vessel, air and pipeline – regulated by the U.S. DOT. Clearly, the most common mode relevant to CVSA would involve shipments by highway. However, since many hazmat shipments are intermodal in nature, the possibility exists that more than one of the other regulated modes may be relevant at any given time.

Through the Pipeline and Hazardous Materials Safety Administration, the U.S. DOT promulgates the federal hazardous materials regulations in 49 CFR parts 100-185. An important component of said regulations involves mandatory training requirements for all hazmat employees (49 CFR 172.702). The idiom “the devil is in the details” is extremely applicable to hazmat training requirements, particularly in the definition of a hazmat employee:

(1) A person who is:

(i) Employed on a full-time, part-time or temporary basis by a hazmat employer and who, in the course of such full-time, part-time or temporary employment, directly affects hazardous materials transportation safety

(ii) Self-employed (including an owner-operator of a motor vehicle, vessel or aircraft) transporting hazardous materials in commerce who, in the course of such self-employment, directly affects hazardous materials transportation safety

(iii) A railroad signalman

(iv) A railroad maintenance-of-way employee

(2) This term includes an individual, employed on a full-time, part-time or temporary basis by a hazmat employer, or who is self-employed, who during the course of employment:

(i) Loads, unloads or handles hazardous materials

(ii) Designs, manufactures, fabricates, inspects, marks, maintains, reconditions, repairs or tests a package, container or packaging component that is represented, marked, certified or sold as qualified for use in transporting hazardous material in commerce

(iii) Prepares hazardous materials for transportation

(iv) Is responsible for safety of transporting hazardous materials

(v) Operates a vehicle used to transport hazardous materials.

As one can readily see, the definition of a hazmat employee encompasses much more than just truck drivers, train crews, dock workers and the crew of a vessel. Many supervisors, support staff and administrative assistants are also subject to the hazmat training requirements. The deciding factor will always be an individual's role in affecting

hazardous materials transportation safety. If unsure of the applicability to your employees, please consult a safety professional who has expertise in the federal hazardous materials regulations.

In addition to defining who must be trained, the U.S. DOT also defines the required scope of the training to include five specific types of hazmat training as follows:

1. General awareness and familiarization

training: broad training designed to prepare an employee to recognize and identify hazardous materials and understand various hazard communication standards.

2. Function-specific training: hazardous materials training specific to the various hazmat functions the employee performs.

3. Safety training: concerning emergency response information, measures to protect employees from exposure, and methods and procedures for avoiding hazmat accidents.

4. Security awareness training: awareness training to identify and protect against security risks associated with the transportation of hazmat.

5. In-depth security training: detailed security training for those employees impacted by a formal transportation security plan.

Hazmat employees must be tested on the aforementioned training subjects. Said training must be provided to new hazmat employees within 90 days of their initial employment and recurrent hazmat training must be provided to all hazmat employees at least once every three years. The company employing hazmat employees is responsible for ensuring all the hazmat training requirements are met and required training records are maintained. ■



CVSA offers in-person and virtual introductory, advanced and overview training courses for hazmat instructors who train hazmat employees on Hazardous Materials Regulations.

Visit www.cvsa.org/training-type/industry-training for more information.



How Driver Behavior Can Make (or Break) Your Sustainability Efforts

By **Mike Soricelli**, Segment Development Manager, EROAD

Transporting around 70% of the nation's freight, commercial motor vehicle (CMV) drivers play a crucial role in the American economy. Drivers also have an important role in the transportation industry's drive to become more sustainable.

A driver's behind-the-wheel behavior has a huge impact on fuel usage and overall vehicle efficiency – which, in turn, affects sustainability – not to mention the bottom line. The American Transportation Research Institute (ATRI) found that there is a 35% difference in fuel economy between the most and least efficient drivers and that many fleets use (or plan to use) “eco-driving” training to reduce fuel use and lower emissions. The following explains how drivers can help make fleets more sustainable.

Reduce Speeding and Other Bad Driving Habits

According to Fleet Owner, the first step in reducing fuel consumption is reducing speed. Case in point: A truck barreling down the highway at 75 mph burns 27% more fuel than a truck cruising along at 65 mph. Furthermore, research shows that aggressive driving – actions like harsh

acceleration, braking and cornering – can lower fuel economy by as much as 33% on the open road and 5% in the city. Taken together, speeding and aggressive driving can really do a number on your fuel budget, maintenance costs and carbon emissions. Fleet management technology, such as electronic logging devices and event-triggered dashcams, provide the data you need to identify problem driving behaviors and coach drivers appropriately.

Curb the Idling

Idling is another major fuel waster. According to the U.S. Department of Energy, a single long-haul truck burns about 1,500 gallons of diesel annually due to idling alone. That adds up to a lot of harmful emissions and thousands of wasted dollars per year.

Educating CMV drivers about the adverse effects of unnecessary idling is a first step toward reducing the behavior. ATRI suggests possibly offering financial incentives to drivers who reduce their idling. Also, fleet technology that enables you to track idle time by location, date, time and duration can provide data to help fleet managers identify and curb excessive idling, lowering your fuel costs and reducing your carbon footprint.

Maintain Proper Tire Pressure

Underinflated tires can decrease fuel efficiency by 2% to 4%, Heavy Duty Trucking reports. Also, wear and tear from improperly inflated tires reduces overall tire life. In addition to having drivers check tire pressure before trips, make use of technology that can ensure proper tire pressure is maintained.

There are a variety of tire pressure monitoring systems and sensors that provide real-time data like tire pounds per square inch (PSI) and ambient temperature. This information lets carriers quickly identify and address underinflated tires, helping to extend tire life, improve fuel economy and avoid potentially catastrophic blowouts on the road.

Optimize Routes for Efficiency

Drivers can plan the most efficient routes by working closely with dispatchers and using truck-centric route optimization technology. They can also significantly reduce fuel consumption and emissions by minimizing mileage and avoiding traffic congestion. Additionally, optimized routes lead to quicker deliveries, improving overall operational efficiency. ■



A Glitch on the Road

Cybersecurity Trends Facing the Trucking and Transportation Industry

By **Skip Wombolt**, Executive Vice President of Transportation Sales, Marsh McLennan Agency; **Stacy Shaw**, Assistant Vice President of Fleet Transportation, Marsh McLennan Agency; **Hannah Hoeflinger**, National Cyber Risk Operations Leader, Marsh McLennan Agency

Risks for the transportation and trucking industry no longer only come from the road. Cyberattacks targeting financial and logistics operations are creating headaches for the industry by compromising organizational information and disrupting entire supply chains. The transportation industry is one of the most appealing to cyber criminals due to supply chain dependence, high-value cargo and time sensitivity. In fact, according to a report by IBM, which can be read at www.ibm.com/reports/threat-intelligence, the transportation and trucking industry was the ninth-most targeted for cyberattacks in 2022. Understanding the trends of these cybersecurity risks and working to mitigate them will be essential for any business operating in the industry in 2023.

Cyberattacks in the Trucking and Transportation Industry

Our cyber specialists handle many clients in the trucking and transportation industry, procuring the right insurance coverage and, most importantly, supporting them when cyber incidents threaten their business. In one incident, a client discovered that their dispatching software was hacked, disrupting driver communications and reducing their ability to invoice and bill clients. Other instances have involved trucks being given fake loads of items to transport or funds being diverted under false identities and intentions.

As a major component in the supply chain, transportation operations and cybersecurity disruptions can affect the entire organization and have a ripple effect on the wider economy.

An Interconnected Operation – A Single Target for Cybercriminals

As technology evolves, transportation and trucking companies are discovering how holistically connected their operations can become. Carriers can now integrate communications, billing and logistics through single database systems. Tech advancements in GPS navigation, networks and automated driving systems further enhance a company's operations. However, with all these important tools and data sources in one place, cybercriminals have a higher chance of disrupting a business's supply chain and operations in one targeted attack.

Cyberattacks and their intended targets take many forms. Phishing scams target employees directly by falsely posing as a reliable third party or someone within the organization. Ransomware and malware can bypass an organization's employees and security system to access confidential company and employee data. Even the rise of autonomous vehicles poses cybersecurity risks as their software can be hacked, leading to a loss of control over the vehicle and potentially damaging property,

employees and the motoring public. These attacks, in addition to other sorts of cybercrimes, bring hefty damage costs, which Cybersecurity Ventures expects to reach \$10.5 trillion globally, each year by 2025.

How Cybercriminals Gain Access to Your Data

With many carriers having gaps in their software protection and employee cyber training, cybercriminals have dug into this industry. According to the IBM report, the primary way cybercriminals accessed data in the trucking industry was through phishing schemes, which made up 51% of the cases studied. Data theft was the most common outcome of these attacks, followed by extortion and impacts on brand reputation. No matter the company's size, making sure cybersecurity measures and training are in place will go a long way in combating the cyber risks.

The Importance of Adequate Cyber Protection

Implementing the appropriate cyber risk controls and purchasing a robust, standalone cyber insurance policy can significantly reduce the likelihood of loss if your company faces a security or privacy incident. In 2022, IBM found that the average cost of a data breach in the transportation industry was \$3.59 million,



» *The transportation industry is one of the most appealing to cyber criminals due to supply chain dependence, high-value cargo and time sensitivity.*

which only some companies have the ability to pay out of pocket. Companies typically manage the scope of an incident far better when they have the appropriate controls and vendors involved up-front, a benefit of a proactive approach to security, policy and insurance.

In an industry that carries valuable property on the road and digitally stores wide-spanning information, any potential data breach could disrupt a company and its role in an entire supply chain network. If trucking and transportation companies want to keep business moving, creating a proactive cyber risk management plan will be key. This can help identify potential sources of risk while also creating an environment of cyber awareness throughout an organization.

Security Best Practices for Trucking and Transportation Businesses

- ✓ Employ software that can detect and flag suspicious emails.
- ✓ Test and encrypt back-ups to avoid business income losses.
- ✓ To the extent possible, separate critical vehicle functionality systems, such as the controller area network bus, from any internet-connected components.

- ✓ Employ penetration testers to assess the likelihood of a malicious actor affecting the functionality of vehicles in your fleet.
- ✓ Verify the cybersecurity practices of third parties before doing business with them.
- ✓ Sanitize data input to decrease the risk of SQL injection attacks.
- ✓ Implement a robust patch management program.
- ✓ Secure remote desktop protocol ports and use multi-factor authentication as standard defenses against remote attacks and credential hacking.
- ✓ Enable encryption for Wi-Fi-connected networks, perform signal audits to ensure signals are not visible outside the network perimeter, and deploy rogue access point detection to block unauthorized access points.

Important Cyber Insurance Coverages to Consider for Commercial Motor Vehicle Fleets

- ✓ Broad primary and contingent business interruption coverage, including forensic accounting coverage and broad period of restoration.

- ✓ System failure coverage, including unplanned human error, programming errors and infrastructure failures.
- ✓ Data restoration coverage with broad scope of reparation.
- ✓ Broad computer fraud and social engineering coverage, including invoice manipulation and assets other than money.

Final Considerations

To help prepare your transportation and trucking business for any cyber challenge, take a comprehensive approach to help manage your cyber risk, which includes examining every aspect of your organization. Consider your operations, compliance, legal, finance, communications and information technology approaches to identify the best solutions for your business.

Proactively prepare your information security, stay up to date with evolving compliance regulations and provide your employees – from your drivers to your executives – with security training and education resources. These strategies will help you best respond to a cyber incident when it occurs. ■

Class 9 Materials: Regulated or Not?

By **J. P. Gibbons**, President, North American Transportation Consultants

Class 9 roadside inspections are sometimes tricky and may result in DataQ challenges, which can be avoided by better understanding federal regulations. This article is intended to provide both critical information on Class 9 requirements and correct basic misconceptions about inspecting these shipments. Let's look at the applicable regulations and what are the exceptions when dealing with Class 9 shipments and vehicles.

Those of you who know me always appreciate that I will defend when appropriate and criticize when necessary. This topic is no different. In the case of Class 9 regulations, the confusion results from forces beyond the full control of the U.S. Department of Transportation. These forces include enacted legislative language based on international regulations and Congressionally mandated rulemakings that the Pipeline and Hazardous Materials Safety Administration had to enact. The most significant Class 9 exception is that a hazardous materials (HM) endorsement is not required – see Title 49 Code of Federal Regulations 383.93 (b)(4). This remains true even for a 7500-gallon tanker of Class 9 materials; the quantity does not change the exception. This is because Class 9 materials require shipping papers and markings, but are excluded from placarding domestically by rail and highway – see § 172.504(f)(9).

Remember, the U.S. did not create the Class 9 designation; the international community

did, and we accepted it under international agreements and enacted it under HM-181 back in the 1980s. Prior to HM-181, we treated most of these materials as other regulated materials A, B, C and E. However, they only posed safety issues in very specific circumstances, such as conditions tied to the mode of transportation. As such, regulators deemed full safety requirements unnecessary and reasonable exceptions were developed for this materials class. Today, enforcement and industry are often still taught that all nine international hazard classes are equal and have the same weight. This is a major misconception.

Additionally, Class 9 shipments by highway should not be treated as placarded inspections on roadside inspection reports and should not be marked as such in the SMS database. Our firm, North American Transportation Consultant (NATC), files dozens of DataQ challenges annually to remove the placard designation from roadside inspection reports. We even challenge and correct clean Level I HM inspections. A number of state DataQ coordinators have asked, why not leave it alone? A clean Level I inspection improves the carrier's HM out-of-service rate under both SAFER WEB and SMS.

There is a very important reason for a carrier to want to stay below the 5% HM roadside inspection rate: insurance, both liability and accident. Enforcement personnel usually do not track insurance trends and issues and

don't realize the impact their inspections may have. Insurance is becoming harder and harder to come by for motor carriers. And without insurance, a carrier is out of business. This year, a major underwriter decided to withdraw from the commercial motor carrier market and stopped issuing policies and renewals. Other underwriters have tightened criteria, excluding HM carriers or specific types of HM operations from their services. Being identified as a HM carrier results in much higher premiums or no coverage at all. Litigation drives excessive awards against carriers, usually leading to large payouts by the underwriter. These payouts negatively impact loss runs for the motor carrier, leading underwriters to levy large premium increases for industry members or withdraw from the market altogether.

So, when completing a roadside inspection on a Class 9 shipment, please save us all time and effort; make sure you do not identify the shipment as "PLACARDS YES." This includes those cases when the carrier has voluntarily decided to permissively display Class 9 placards. Even in those cases, the placards are not required. Always be careful when dealing with Class 9 materials and shipments, as there are many exceptions to consider in both the hazardous materials regulations and the Federal Motor Carrier Safety Regulations. Best of luck to you. ■



Human Interaction Is Key for Successful ELDs

By *Ethan Quimby, Marketing, Fleetworthy Solutions*

Many can agree that hours-of-service (HOS) management is a critical aspect of all safety-sensitive operations, as fatigue has proven to be a top cause of accidents involving a commercial motor vehicle (CMV). Your truck's electronic logging device (ELD) is the best tool available to capture HOS data and measure it against the HOS minimums set forth by the Federal Motor Carrier Safety Administration (FMCSA) in a standardized format. These devices are heavily relied on to act as the de facto hours-of-service clock, referred to in audits, roadside inspections and litigations. The HOS rules are specific and meant to be followed, so ELD manufacturers build and implement logic and timetables into a recordable and presentable format that your organization and law enforcement can access on demand.

Utilizing an ELD is critical for business operations and meeting minimum regulations established by the U.S. Department of Transportation and FMCSA. But that doesn't mean we should put all our trust in these devices. What if the ELD is not accurately portraying compliance and risk and is instead providing your fleet with a false sense of security? Are you depending on your ELD alone to manage your HOS, or are you actively participating in the process?

Successful fleet managers engage with their drivers and get to know them on a personal level. Is there anything going on in their lives that is affecting or limiting their rest periods and creating fatigue? Examples include a second job, sick family members or marital issues. Sometimes life gets in the way, and drivers should feel comfortable telling their managers they are too stressed or fatigued to drive without potentially severe consequences. Managers also need to review routes for compliance and reasonableness. If the route is too long, the driver is set to fail from the beginning.

ELDs were intended to make it easier and faster to track, manage and share HOS data accurately, in turn creating a safer working environment. While there is no doubt tracking HOS data electronically is much easier today than it was in the past with paper record of duty status (RODS), the data still needs to be analyzed and managed by a safety professional.

According to the Compliance, Safety, Accountability enforcement program, HOS violations in 2022 accounted for three of the top 10 violations with out-of-service orders,



including "no RODS when required" and false RODS. The top HOS violations include exceeding the 11- or 14-hour driving limits, not taking the required 10 hours off and false RODS. These statistics reveal that management relies too heavily on ELDs and should start manually reviewing RODS daily and holding their drivers accountable for following HOS rules.

The question of whether ELDs have improved safety as anticipated initially is hard to quantify due to factors such as the COVID-19 pandemic, which resulted in several HOS exceptions, as well as the HOS changes made in 2020. However, if you look at the most recent data (October 2022) published by FMCSA regarding crashes involving fatality or injury, it proves that ELDs on their own are not as effective as we need them to be. Rates for "accidents by 100 million miles" have increased since the ELD mandate was enacted in 2017. These rates increased by 10% between 2016, the year before the ELD mandate was enforced, and 2019, proving that relying strictly on ELD data is not an effective HOS management tool for fleets or public safety.

Considering the cost of implementing these devices, one would expect an observable return on investment, such as reducing accidents, injuries and fatalities and minimizing the workload on a motor carrier. That has unfortunately proven to be the opposite of reality. Increases in accidents and significant lawsuits have proliferated, as indicated by

courts ordering trucking companies to pay increasingly larger damages (on average) since the ELD mandate went into effect. According to the American Transportation Research Institute's study, "Impact of Nuclear Verdicts," plaintiffs seeking damages for accidents linked to fatigue and HOS violations have a 95% success rate in court. In many of these cases, the driver's hours of service were egregiously in violation, with the motor carrier found to be responsible and/or negligent.

All the available data from an ELD can create a perception of compliance. It is essential to question this perception. How is a fleet managing the ELD output or reporting capabilities? Can the carrier point to actions or trends that ensure overall driver compliance and risk reduction, in addition to employing safe HOS practices? Are they equipped to manage all elements of FMCSA-mandated HOS compliance without assistance? If an audit were to be called tomorrow, how confident would they be that they'd receive a satisfactory rating? How a motor carrier manages ELD compliance, including reports, trends and data output, is critical for going beyond the minimum requirements while not falling victim to compliance complacency.

In our line of work, we are unable just to rely on technology and data to create a culture of safety. We must go beyond compliance and numbers, embracing human interaction to keep everyone safe on our roadways. ■



The Business Case for a Fleetwide Safety Mindset

By **Fred Fakkema**, Vice President of Safety and Compliance, Zonar

The cost of trucking is rising.

Fuel, tires, wages, maintenance and insurance premiums are up across the board, creating new challenges for the industry. Total marginal costs reached a new high in 2022, beating the previous record in 2021, according to a new report by the American Transportation Research Institute (ATRI), available at www.truckingresearch.org/atri-research/operational-costs-of-trucking.

Fleets are forecasting more cost increases for 2024 alongside anticipated increased budget items for litigation, training, safety technology, driver compensation and out-of-pocket incidents. Still, they can't lose sight of safety: safe fleets are profitable, and profitable fleets are safe.

Deploying innovative strategies – without sacrificing safety – will be paramount to hold the line against rising costs.

Safety Is Everyone's Job

Whether a company wants to reduce insurance claims, attract new business, protect its reputation or retain drivers, achieving these objectives requires a safety mindset. What's standing in the way for some organizations is a halfhearted approach. Too often, organizations view safety through a narrow lens – something the compliance department handles.

Imagine a management team that says if drivers followed the rules, they wouldn't

get in accidents; drivers who say accident rates would decrease if leadership invested in better technology; compliance managers who say their recommendations are always ignored. Such an organization would be non-functioning.

In fleets that build strong safety cultures, employee empowerment is booming. Everyone recognizes that safety is a shared responsibility, and they gain value from their peers in industry networks.

ATRI released a report in April that found motor carriers active in state and national associations, such as the American Trucking Associations and the Commercial Vehicle Safety Alliance, are safer than carriers who are former association members or who have never been members. That report is available at www.truckingresearch.org/2023/08/atri-research-documents-critical-role-of-association-membership-in-motor-carrier-safety.

Set Attainable Goals

Fleet managers may be quick to promote “zero safety incidents,” but reaching zero takes a rigorous level of understanding and cooperation that few have attained. That's why “zero” is a goal many organizations have yet to achieve.

Rather than zero, some carriers have adopted programs, such as million miler awards, honoring individual drivers. J.B. Hunt, for example, recognized 84 elite drivers earlier this year for driving over two million miles each

without a crash. The award event even included a driver who surpassed five million crash-free miles – only the second driver to do so in J.B. Hunt's history. To stay at one company long enough to build that kind of track record is beyond impressive.

It's up to management to shift the goals from unattainable to achievable. Leadership teams must be deliberate in the targets they set. Additionally, they must provide context to motivate and inspire the entire team to commit to such goals.

A fleet's team projects the attitudes, values and norms of a company's safety culture and influences how new employees view it. This positive attitude can ensure new employees are onboarded, celebrated for their wins and able to build on company successes.

Prioritize Ongoing Training

During my career in law enforcement, we trained to be prepared for anything. In life-threatening situations, being ready can make all the difference. This concept is true in commercial motor vehicle driving, too.

Carriers know there's more to driving than holding a steering wheel. The best drivers know every aspect of their routes, how to watch the road ahead and how to identify an escape route – that is, which way to turn to avoid a collision. They know the seasonal considerations, including winter driving tactics and navigating back-to-school traffic.



» YEAR-OVER-YEAR OPERATIONAL COST INCREASES

Fuel and wages eat a large chunk of fleet budgets. Even with better fuel economies, the increase hurts when the cost per gallon jumps 53.7%, as it did from 2021 to 2022. ATRI's cost analysis shows that fuel costs increased to \$2.25 per mile, a 21.3% increase over 2021.

Insurance costs are also up. Premiums increased by at least 7.2% in the final quarters of 2022, and ATRI's report cited industry experts who expect liability premiums to continue climbing, partly due to rising costs and poor performance, despite large truck crashes becoming less prevalent in 2022 than in 2021.

Regular training helps fleets create daily opportunities for drivers to explore new technologies and best practices. And there's a cost savings element. Training makes sense if fuel efficiency isn't being optimized or equipment is coming back with avoidable wear and tear.

Consider your expectations, company culture and operations to prioritize what type of training will help the most.

Reduce Driver Churn

A safe driver is a supported driver. There's no shortage of challenges on the road, and when drivers feel mistreated or underappreciated, they'll move on to a team where they are appreciated, which places an increased burden on your remaining team.

Positive feedback and driver incentives are part of the solution, and the industry is spending more to attract and retain drivers. According to ATRI's study, generous sign-on and retention bonuses are common, and driver wages increased by 15.5%, to \$0.724 per mile, between 2021 and 2022. But carriers must also consider how to make the job less stressful and more enjoyable for the long-term retention of safe, efficient drivers.

Investments made today support your team to create safer drivers for tomorrow. Consider what causes fatigue and distractions. Is your technology due for an upgrade?

One approach to improving the driving experience is to provide technology that helps drivers streamline their day, increase earning potential with more drive time, and enjoy a modern, professional work experience. As the trucking industry becomes more complex and regulated, managers need a cost-effective approach to modernize their transportation management systems, centralize the key apps drivers need, enable communication between drivers and managers, and empower all employees to contribute to a safety culture.

Safety Isn't Just a Human Issue

All the training and preparation in the world goes out the window if vehicles aren't properly maintained. It starts with comprehensive pre- and post-trip inspections.

A single pencil-whipped inspection has cascading consequences. For example, if a chassis goes uninspected, the anchor points, rims, hubs, tires, load securement and rear axle area remain unchecked and vulnerable to a potential mechanical failure. As expectations for inspections and federal requirements become more stringent each year, organizations can't leave anything to chance. However, many fleets still use outdated inspection verification and compliance processes, increasing the risk of mechanical issues or violations during roadside inspections. It also impacts safety and can lower inspection scores.

Digitized driver supports help freights mitigate risks of failure on the road, reduce

unnecessary idle time and avoid costly roadside maintenance. In tandem with electronic logging devices, mobile electronic verified reporting systems for regular pre- and post-trip inspections verify proper electronic documentation of necessary repairs and replace inefficient paper defect forms.

By providing drivers and dispatchers with modern fleet technology, you empower your team to make better safety decisions based on all the data sources around them, including pre- and post-trip inspections, mileage, engine hours, duty status, human resources data and even weather.

Cultural Change Starts Today

Trucking companies rely on their safety records as an advantage. Fleets must proactively approach road safety to stay ahead of the competition and in compliance with regulations and legal requirements.

With rising operational costs, fleets must boldly implement the cultural changes and safety investments needed to control spending.

Innovative fleets will analyze the costs of their safety risks and mitigate them via telematics and intelligent fleet management technology. At the same time, they will rally their team, enlist key influencers and deliver the wins they need to transform their organizations. ■

The Sum of the Whole

By **Jeremy Woolward**, Fleet Safety Manager, Chariot Express Ltd.

This past spring, I had the amazing opportunity to finish the Canadian Industry Roadside Inspection Program series by participating in the Vehicle Requirements (Part B) element in Calgary, Alberta, Canada. This was a year in the making, as I had previously participated in the Driver Requirements (Part A) element back in March 2022. Once again, the Alberta Motor Transport Association (AMTA) hosted CVSA. Back for round two was Kerri Wirachowsky and her crew of instructors: Alf Brown and Alex Bugeya of Frontline Commercial Vehicle Solutions and Sgt. Brian Davyduke of the Alberta Sheriff Highway Patrol Division.

Unlike the Driver Requirements Course (Part A), I went into the Vehicle Requirements Course (Part B) with a bit more information about what was happening, what the learning outcomes should be and what it took to have this program offered in Canada. As such, I had a vested interest in having this program come back to Canada and worked with Wirachowsky, as well as AMTA to help promote the program and its value, as well as encouraging industry to sign up and participate. While the class of 2022 had some solid numbers in attendance, the class of 2023 surpassed what was anticipated. We had a full class, and industry came to play. The energy in the room was high, notwithstanding the heat and smoke from the early spring fire season outside. People were

keen on learning what Wirachowsky and crew were teaching. While we covered everything there was to cover, the feeling at the end was that we had only scratched the surface of what it was possible to learn, and we were left wanting a whole lot more.

When I took my Driver Requirements Course (Part A) in 2022, I was very much in my element from a theory and compliance standpoint. I understood how to evaluate driver documents and hours-of-service reports, interpret the data and identify whether violations were present. The Vehicle Requirements Course (Part B), however, was a different experience for me as I came into the industry from the theory side of things, never having driven as a commercial motor vehicle (CMV) driver. My understanding of how a CMV operated from a mechanical standpoint was that there were hydraulic brakes and air brakes, and those air brakes had either manual or automatic slack adjusters. I knew vehicles had suspensions but couldn't tell you what they looked like. I knew you could rock a steering wheel and that a tire was considered flat if it was under 50% of its maximum pressure. In many ways, I still consider myself a Luddite when it comes to mechanical components. My lack of practical knowledge in this area scared me; I thought I would stumble, mess up and end up an embarrassment to a

crew of people I truly respect and value as industry leaders.

However, that fear dissipated rather quickly when I saw that others in the room were exactly in the same space I was. They also came into industry from different perspectives, and while not all of us knew how to describe what a driveline was or how to identify a brake chamber, we all had knowledge of different parts pertaining to a safe and compliant commercial vehicle. Together, we were able to help teach each other and lift each other up, and by the end of the week, we were all on a somewhat level playing field, each better than when we began. This type of learning is truly special, and it really works when your instructors and students understand and can relate to each other.

This is probably one of the greatest compliments I could give the Canadian instructors – there are four of them, yet they work as one. Each plays to their strengths while acknowledging where they may be less knowledgeable; but before that gap can become a detriment, the next instructor picks up the baton seamlessly and carries on. The Canadian team also does a fantastic job representing the various stakeholders with different perspectives on what constitutes a



Chariot Express Fleet Safety Manager Jeremy Woolward with the office's new CVSA wall.

safe and compliant vehicle, as well as a safe and compliant driver.

Many facets of CMV industry and enforcement are represented: Sgt. Davyduke represents active-duty law enforcement, Brown and Bugeya represent consultants and compliance specialists, the students come from various segments of industry, the AMTA is part of the industry lobbying arm in Alberta, and finally, Wirachowsky hails from CVSA – the keystone that brings all the elements of CMV safety together. The conversations that took place, the questions asked and the experiences shared further heightened the time we all spent together and made the inspection process much less stressful because we were empowered with all the provided information.

I once again left the program energized and committed to doing more than I was before. Besides learning the components of a CMV, I learned how to read a Commercial Vehicle Inspection Report; and while I previously knew what a pass or fail represented on the report, I never knew what the metric was for a mechanic to evaluate it. Now, not only do I know where to find the metric, I also know how to evaluate and determine for myself whether a vehicle component is in violation and whether that violation is also an out-of-service item. When doing a truck crawl of

my own after class one day, I experienced firsthand what is involved in a thorough vehicle trip inspection. I also took away some ideas on how best to incorporate the North American Standard Inspection (NASI) Level I into my fleet's preventative maintenance program by building an in-house program inspired by the NASI standards. Training always gives me a way to keep my skills fresh and also allows our fleet to be proactive in identifying defects and correcting them before having inspectors identify them for us when stopped at scale houses. In our industry, where lagging indicators usually tell a sad story, it becomes imperative that industry leaders find ways to establish and develop leading indicators that flip the script and inspire others to do the same. It's better to be known for what we can do as opposed to what we already did.

Throughout the weeklong training, we spoke about how all these components come together, and after having taken both the driver and vehicle requirements courses, I see how this is true, and how this is more amplified for those whose primary accountability is fleet safety. In Canada, we segregate transportation safety and worker safety into two different silos by identifying what each component is designed to protect. While good on paper, this artificial segregation

negates the fact that the hazards encountered are the same whether you're protecting the public or the driver. Due diligence does not care whether it is transportation law or occupational health and safety law. This is true for carriers and, as Wirachowsky taught, true for inspectors as well. While the expectation is that industry walks away from these programs with the knowledge of what to expect when at roadside, the other takeaway is that industry can identify whether inspectors are following through the way they should and are armed with resources to address any inconsistencies identified together in good faith.

I am sad there is no Industry Part C course to look forward to. That said, I look forward to when this program returns in 2024 and the next class gets to partake in this knowledge. I am equally looking forward to helping make that happen. Our company, Chariot Express, renewed our CVSA membership this spring, and I encourage anybody on the fence about investing in a CVSA membership to take the plunge and purchase one. Its value cannot adequately be described, but I wholeheartedly assert that you won't be disappointed with it. These programs will transform how industry functions moving into the mid-21st century. I'm happy to be a part of it.

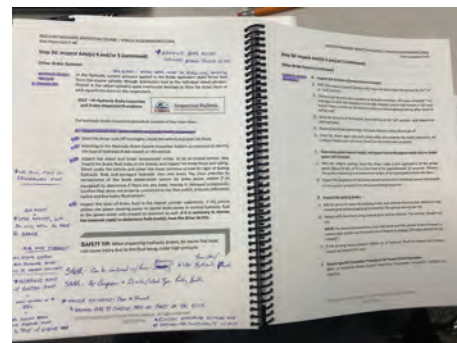
Stay Safe. Stay Compliant. Stay Decaled. ■



From Left to Right: Jeremy Woolward, Alex Bugeya, Alf Brown, Sgt. Brian Davyduke and Kerri Wirachowsky after the truck crawl outside the Alberta Motor Transport Association building in Calgary, Alberta, Canada.



The CVSA wall & its beginnings.



Woolwards' participant workbook with notes taken during the course.

Identifying a Problem and Working Together to Solve It

By Sulev "Swede" Oun, Owner, O&K Truck Repairs

First, I should set the stage for my credibility on the subject of this article. I own a general repair shop and provide training for commercial motor vehicle (CMV) fleets and state agencies, mainly in New York, much of it through the Trucking Association of New York. My training covers brakes, electrical systems, regulations, driver training and other subjects. My interactions with different individuals and entities that I train allow me to get a real hands-on pulse of the state of our industry. The subject matter in this article might not ring true for everyone. However, it is based on the real world we live in today. It would be nice to say that we live in a perfect world, but we all know that's not true. So, let's get started.

As a senior member of our industry, I have witnessed and evolved through many changes impacting trucking throughout the years. Welcome to the 2020s, when we began experiencing supply chain issues. In some ways, these are still ongoing, as is evident in continued parts shortages. Trucks often sit in shops waiting for backordered parts, affecting the expected delivery speed that keeps the shippers and customers happy. These delays can be quite stressful for many fleets. To avoid these repair delays, some companies may take shortcuts to keep fleet vehicles going.

Most importantly, we also have a shortage of qualified technicians and drivers – "qualified" being the key word. Quality wound up as a hot topic of conversation throughout my travels and interactions with people. Unfortunately, the staffing shortage among skilled tradespeople has created an environment where the existing qualified technicians and drivers are overwhelmed trying to keep trucks on the road, supplying our population with all the products it demands.

The shortage of CMV personnel goes beyond technicians and drivers. For example, in my state, the same phenomenon is happening with commercial vehicle enforcement (CVE) personnel. Many of my friends and colleagues in enforcement are retiring, leaving a void that is hard to fill. Their jobs require additional training in a host of regulations and technical knowledge specific to trucks. Officers in other positions aren't always able to dedicate the time and effort it takes to learn these new skills or become ingrained in the CMV community.

Consequently, many of my friends who are still in CMV enforcement work overtime so that even with fewer staff, the same number of safety inspections get performed. These officers want to ensure that the commercial drivers on our roads and the vehicles they

drive are safe. However, that extra effort keeps them from enjoying their personal and family time. It's rough out here.

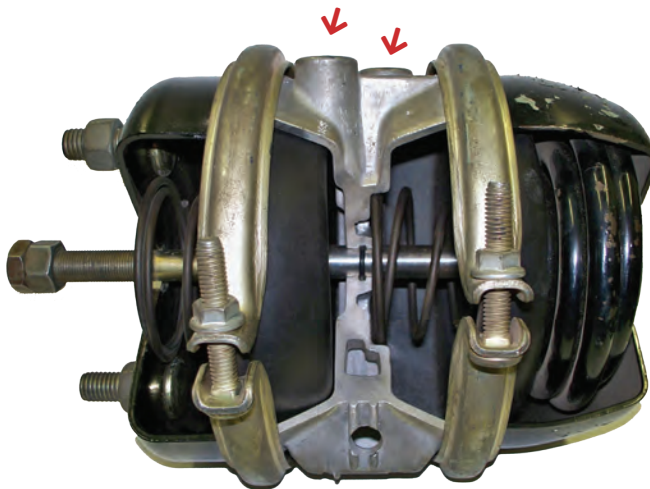
The increase in online ordering has been another game changer for our industry. Just think of the logistics it takes to fulfill the overnight or two-day delivery promises made to consumers. The effects of this are evident throughout the country as we get more and more mired in traffic. Due to all these shortages and the expected quick delivery times, we are now at a point where fewer people are doing more work, opening the door to mistakes. That doesn't exclude me – I am not immune to making mistakes. In today's world, many companies are forced to hire minimally qualified people to keep everything going. The unfortunate part is that I am starting to see an uptick in violations related to the lack of proper maintenance practices, which sometimes border on dangerous. I see it with various vehicles coming through our shop and shared photos and videos I get from my CVE partners/friends.

Because of our situation, many shops and fleets are forced to shortchange proper preventative maintenance, not on purpose but due to the lack of qualified people to perform the maintenance or the knowledge that necessary parts aren't available. This is evident by violations that should have been caught beforehand through proper annual periodic inspections, preventive maintenance and driver pre- and post-trip inspections. Some of it has been ongoing for years. This should not be construed as an indictment or condemnation of our industry. It is a basic survival instinct to keep commerce going. The severe supply chain issues of 2020–2021 showed the negative economic impact when this doesn't happen.

However, the issues that concern me most are the ones cropping up that aren't easily discovered during an inspection, yet pose a real risk to road safety. We see these types of issues when maintenance practices are being performed by minimally qualified people. A good example of this is crossed air lines on brake chambers and camshafts placed on the wrong side of a vehicle. These issues can compromise the brake system, and I run across them more often than you think. How can they be missed? Sometimes a good driver might complain about inadequate braking, indicating that something is not right. But keep in mind, if it is a combination unit and, for example, the tractor has good brakes but the trailer has deficiencies, the driver might not necessarily realize the trailer brakes are compromised until it's too late.

To put it in perspective, we'll look at the air brake chamber. (See picture #1.) A typical spring brake chamber has two portions: a service brake and the park/emergency brake, with a heavy coiled spring utilized as a mechanical braking device. Two airlines go to the chamber. The one farthest away from the pushrod (the rear port) supplies air to a diaphragm in the park/emergency portion of the chamber to release the brakes by compressing the heavy coiled spring housed in the rear portion of that chamber. This allows for the application of the service portion (closest to the pushrod and activated by using the brake foot pedal) as required to slow the vehicle down when driving. The service portion also has a diaphragm. The important takeaway is that proper airline placement is required for proper brake control at each wheel end.

As a side note, when the button is pulled out, air is exhausted from the spring portion of the



Picture 1. Cutout of a brake chamber showing locations of ports. Closest to the pushrod is the service port.

chamber, allowing the heavy coiled spring to expand and force the pushrod out to engage the shoes against the drum and mechanically hold that wheel end in a parked (locked) position with approximately 1800 lbs. of force. This works only if the coiled spring is intact and the brakes are properly adjusted. That is why we do brake inspections. Summarizing up to this point: air applied via the park (supply) valve to the rear portion of the spring brake chamber releases the brakes. Exhausting the air (pulling button out) applies the brakes (parking). The important takeaway on this is that proper airline placement is required for proper brake control at each wheel end.

Let's think about this. If the supply (park) line is put on the service portion instead of the spring (rear) portion, the service (foot-applied) brake will come on every time the supply button is pushed, and it will remain applied as long as the button is in, basically locking the shoes against the drum on that wheel end. Inversely, in this scenario, when the service (foot) brake is applied, air is applied to the rear spring portion. However, the heavy spring most likely will not compress because the air pressure for a service brake is lower than the minimum of 60 pounds per square inch required to compress the heavy spring and hold that brake in a released state. The park button likely won't stay in at a lower pressure.

Now that we grasp how air brakes work, we might ask ourselves how it is possible to cross the lines and how the vehicle can release the brake to be driven down the road. In this scenario, chances are good that the mix-up occurred during a brake chamber replacement. The tech might have adjusted the brakes with the chamber caged (released) and told the driver they were good to go. Once the driver pushes the button in, the service brake would immediately come on. The driver would feel this and return to the shop. Hopefully, someone would find the mistake and correct it. If not, the brakes on that wheel would likely overheat to the point of failure. If the truck was brought back into the shop and the tech went to adjust the brake with the button in (now released), they might assume the adjustment is too tight and back it off via the slack adjuster until the brake is free, not realizing from that point on that there is no service brake at that wheel. In this case, the vehicle might be used until someone with a good knowledge of brakes catches that mistake during a preventative maintenance or inspection.

If I switched the lines this way, I would be embarrassed and admit that I really don't know what I don't know. I would look for some guidance and training so I would never make that mistake again. Also, as a shop owner, I would take responsibility to ensure

this mistake would not occur again. This is where I have an issue. How does something like this happen in the first place? We are so desperate to get help in our shops that we overlook some very basic concepts, like those outlined in Federal Motor Carrier Safety Regulations Part 396.25. Issues like the one in this example come from technicians who lack an understanding of the air brake system and how its components function.

How would we catch this during an inspection? Keen observation would be the first step. We were born with a pretty good set of tools: eyes, ears, hands and brains. When the driver releases the brakes (pushes the dash button in), you should be able to see the pushrods being drawn into the brake chambers. If one isn't being drawn in, I would suspect it has an issue. The same would be true if you observe minimal or no movement of the pushrod when the driver steps on the brake pedal. Once you suspect an issue, the next step is identifying the cause. That might require following the airlines. Usually, a relay valve is in proximity to the brake chambers. If that is the case, simply verify that the line closest to the slack adjuster/pushrod/mounting bracket goes to the relay valve. That would be the service airline. If it doesn't, the lines are switched. Due to the automatic braking system requirements, today's vehicles utilize combination relay/modulator valves. Of course, if the line coming from the rear of the chamber goes to the relay/modulator service valve, the placement is wrong. See picture #2.

Hopefully this brings awareness to some of the observed problems in our industry and offers a beneficial bit of Brakes 101. Sooner rather than later, we need to develop a way to get everyone concerned with, and provide resources for reaching, a higher level of vehicle safety and maintenance.

Inspection and maintenance go hand in hand. You can't have a good inspection program without a good maintenance program, and you can't have a good maintenance program without a good inspection program. Both require a thorough knowledge of the many systems and components required for a safe vehicle. We are all forced to fill the staffing gaps in our industry due to circumstances that are often beyond our control. Unfortunately, quite often, we fill critical roles with undertrained people due to the pressures and constraints of the industry.

Ultimately, we are all responsible for ensuring that the commercial motor vehicles and drivers on our highways are operating safely. This is just the beginning. ■



Picture 2. Showing crossed lines. The supply line is going to the modulator valve. This is wrong. Also, the condition of the chamber and hose indicates this condition has existed for quite a while.

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