

# MAINTENANCE MATTERS

WITH

James  
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## CONTENTS

Recruiting and retaining young technicians: Pgs. 2-3

Controlling soot : Pgs. 4-6

Brakes: Pgs. 8-9

Toolbox: Pgs. 10-11

So much has been made about the shortage of qualified truck drivers, yet the situation is as severe, if not more so, in the shop. No one, it seems, thinks of becoming a heavy-duty technician as being a glamorous or desirable career choice.

This is difficult to understand, when you consider a heavy-duty technician can work consistent hours, be home with the family every night, spends his or her days working in a high-tech industry, often on computers and, with overtime, can pull in a six-figure salary.

The only explanation is that prospective technicians are not yet aware of how drastically the industry has changed in recent years. Or, their main influencers – parents, teachers and guidance councillors – have been blind to the changes and continue to deter students from pursuing this highly rewarding career path.

I recently spent more than an hour interviewing Lloyd De Merchant, area maintenance manager for Penske Truck Leasing and this year's Canadian Fleet Maintenance Manager of the Year. We spoke at length about the shortage of new talent entering the industry. He has taken it on as a personal challenge and gets out as often as possible to speak to students, not only at the college level but even high schools, about the profession. Lloyd gets genuinely excited about attracting young people to the trade and then working with them on the shop floor. He likens it to playing softball with your kid. But he also admits there are special requirements when it comes to managing young technicians.

They like to be challenged, but they also want to be recognized for a job well done. They don't just want to know how to do a job, but why it's done a certain way. And they want more than just monetary rewards – they want a career that's going to fit their lifestyle. There's no reason the industry can't accommodate all of those desires. In this edition of Maintenance Matters, we lead off with five tips from Lloyd on how to attract, retain and manage young technicians. We also bring you a feature on how to control soot, written by the experts at Petro-Canada Lubricants. Technical correspondent John G. Smith explores brake trends. As always, please feel free to write me at [jmenzies@trucknews.com](mailto:jmenzies@trucknews.com) to let me know what you want to read about in the next Maintenance Matters. **MM**



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# Canadian Fleet Maintenance Manager of the year Lloyd De Merchant

On recruiting,  
retaining  
and managing  
young  
technicians

By James Menzies



It's a scary stat. In Ontario, the average age of a heavy truck and coach technician is 52. During a recent sit-down interview with Lloyd De Merchant, area maintenance manager with Penske Truck Leasing and winner of the Canadian Fleet Maintenance Manager of the Year award, we spoke at length about how his company is looking to build and maintain a pipeline of new entrants to the industry.

I began by asking De Merchant if he was alarmed that the average technician in Ontario is 52 years of age?

"It was alarming to me six years ago when I heard the number of technicians that were retiring and expected to leave the trade versus the number of technicians that were available to replace them. It was half. We pushed ourselves ahead about four years ago, because we saw it coming. We saw the tenure in our shop," he said. Following are five tips on how De Merchant is actively developing a pipeline of young technicians to work in the 22 terminals he oversees.

## Reach out to them when they're young

De Merchant works with local colleges and trade schools to discuss opportunities in the field, however he said it's important to get to students who haven't yet decided on a career, since those who are already preparing for a career in the industry are likely to follow through. This means visiting high schools, which close to home includes Bramalea Secondary School.

"We can't just focus on college, because they're already in it," he said. "I can give them that pep talk and pat on the back and show them what the world at Penske looks like, but they're already committed. I want everybody else to know. I wish the Ministry would put billboards up and send flyers out to the high schools and to parents and make them understand, this career will open up doors for your child."

## Include the parents

Sometimes, convincing the parents that a career as a heavy truck technician is a

good choice is more difficult than convincing the students.

"I went and sat down at Bramalea Secondary School just to talk to parents, to open their eyes up," De Merchant explained. "Years ago I was called a 'grease monkey.' That's what they referred to us as. Now, we're *technicians*. Your son is not going to work to get dirty. There are jobs where he'll get dirty, but your son is going to work because of their technical experience and knowledge and a lot of it's computers. The majority of it is sensors, wires and ECMs.

"It has opened a lot of parents' eyes up. I was surprised to find parents didn't realize how much technicians make these days. Their jaws dropped."

A heavy truck technician can pull in six figures including overtime, De Merchant points out.

### Showcase your top performers

When De Merchant visits schools to talk to budding technicians, he likes to bring along some of his shop superstars - including the technician who drives a brand new Lexus, or the

one who started as a technician and went on to enjoy a rewarding career doing something entirely different within the company.

"There are so many opportunities for these kids," he said. "Just because they start as a mechanic doesn't mean they'll end as a mechanic. I tell kids, wrenching is an opportunity to get your foot in the door. What you do after that is up to you."

Talking to professionals who've achieved success in the industry is invigorating to prospective new hires, De Merchant said.

### Don't limit your search

If De Merchant sees potential in a young person, he'll bring them on and work with them to get the certifications they require. He'll also hire them when a position isn't yet available, to ensure he has someone ready to step into the job when the time comes.

"I'll take someone who knows nothing, because I know I have the means to give them everything they need," he said. "They have no bad habits - they haven't learned any." It's also important not to limit the

scope of who you pursue, based on perceptions. For example, by focusing only on males, you cut your potential hiring pool in half.

De Merchant said he has a female technician working in one of his shops who he'd put up against anyone. Female students inherently have many personality traits that translate well to a career in the shop, he said.

### Keep them engaged

Once hired, young technicians need to be managed differently than the old-school mechanics, De Merchant admitted.

"You have to keep them excited," he said. "These younger kids coming into the industry ask, is this a rewarding job? Reward comes in many ways. The kids want to understand, am I doing it right?"

They enjoy challenges De Merchant said, and they want to know not only how to do something, but why it's done that way. Typically, young technicians want more interaction, guidance and encouragement, De Merchant said. He enjoys this aspect, and likens it to playing softball with your kids. However, he also said you can't be too abrasive with young technicians as they don't always take criticism well.

"You just have to keep it on a positive note," he said. "They take things personally nowadays. These kids take it to heart. If they put an engine back together and they find a leak, it's devastating to them. You have to point out what they're good at, that's what gives them drive." **MM**

*To read a full profile on De Merchant, see the August issue of Truck News or read it online here.*



# SOOT

## IS ALWAYS IN SEASON

Brought to you by the experts at Petro-Canada Lubricants Inc.

**Y**ou may not be able to control the weather, but when it comes to trekking through blizzards, or blistering heat spells, it's clear that the weather can sure control you and the success of your fleets.

Bertram Drilling knows what it's like to work in all kinds of weather. Since 1962, this Alberta-based company, one of the largest specialty drilling companies in North America, has been drilling in some of the world's harshest climates, from -35°C in the frigid Arctic to oppressive +40°C heat at the equator. These conditions present unique challenges for engines and the oil that protects them.

"Our equipment has to operate in extreme conditions, far from any service bay," says Lester Stanvick, a supervisor with Bertram Drilling. "We need an oil that can help extend our service intervals and the life of our units. That means it can't shear down or thin out of grade at high operating temperatures. The oil also needs to resist thickening so that we're protected during cold start-ups."

A lubricant that can effectively control soot will deliver better protection against wear and prolong engine life in all weather conditions.

"Today's tough operating conditions can produce and retain more soot than ever before and soot can affect costs across the board,"

says Barnaby Ngai, transportation oils category portfolio manager at Petro-Canada Lubricants. "In fact, as engine loads get heavier and drain intervals are extended further and further, the importance of controlling soot has never been greater."

As soot agglomerates in engine oil it can increase the viscosity level of the lubricant. Even in the most advanced engines running on ultra-low sulphur fuel, soot can have a significant impact on engine performance.

### **Soot can stop you cold**

Higher viscosity oil has diminished pumpability and can leave an engine under-lubricated. Nowhere is this more dangerous than during cold weather start-ups when oil flow is reduced by low ambient temperature and the engine is the most vulnerable to oil-pumping failure.

"Fuel efficiency suffers in the winter, which can result in increased soot formation," says Ngai. "Engine soot has a thickening effect on lubricants, especially in cold weather when fleets can least afford it. An engine oil in these conditions needs to maintain its pumpability to be able to protect vital engine components and keep engines running."

For Glen Armstrong Construction that meant finding a lubricant that could perform at

\* Based on MACK T-11 Enhanced Soot Control Test results. DURON-E Synthetic 10W-40 performed 2.2x better than CJ-4 requirement, while maintaining viscosity level.

temperatures down to -40°C. To keep their equipment operating in the oilfields near Peace River, Alberta, they turned to Petro-Canada's DURON.

"In the past, we would expect 10,000 hours from an engine before some form of major rework would be required," says Glen Armstrong Construction's president, Richard Armstrong. "Now we have engines that continue to provide reliable, trouble-free service even after 24,000 hours."

### Putting soot to the test

Both cold weather and soot can thicken engine oil. Together they can be a deadly combination for engine performance. Although you can't control the weather, Petro-Canada Lubricants experts have proven you *can* control soot and its impact on your engine oil across seasons. Petro-Canada Lubricants was able to demonstrate how their oil can

handle soot in tests involving Mack T-11 engines. During the testing, they frequently sampled lubricants and checked them for viscosity to see if soot was thickening up the oil. The test showed that, even though the engine was producing soot, DURON-E Synthetic 10W-40 was dispersing it before it had a chance to agglomerate into the rock hard clumps that can damage components. In fact, DURON-E was shown to disperse soot up to 2.2 times the industry standard.\*

"When it comes to managing soot it's very much about prevention," says Ngai. "There will always be soot in your engine, but if you can get to it before it clumps and becomes harmful, that can prevent many potential problems down the road."

### Soot: the thick and thin of it

While increased viscosity due to soot agglomeration can create problems

for cold weather operations, it's also a serious issue when the temperature rises. And in some ways, these troubles can be even more difficult to detect.

As oil gets hotter it tends to thin out. When oil is too thin it doesn't lubricate properly and can leave the engine unprotected. At the same time, when soot is present it can cause an unwanted thickening effect on engine oil – an effect that's hard to see in a lubricant that doesn't have good oxidative and thermal stability. Therefore, the risk of soot is still present but the danger is masked by the thinning of the oil.

To avoid these challenges when facing extreme high temperatures, fleets need a lubricant with an advanced shear stability formulation to maintain stay-in-grade performance. High shear stability ensures better protection from wear and optimal engine operating power.



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DURON™-E seeks out soot and prevents it from damaging your engine, handling up to twice as much soot as the industry standard.\* DURON-E maintains its viscosity to help you maintain peak operating efficiency.

**Learn more at [fightsoot.com](http://fightsoot.com).**

**Fight Soot. Save Money.**

SOOT IS  
**DRAGGING  
DOWN  
YOUR FLEET**

\*Based on MACK T-11 Enhanced Soot Control Test results. DURON-E Synthetic 10W-40 performed 2.2x better than CJ-4 requirement, while maintaining viscosity level.  
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And the purer the base oil, combined with advanced soot handling, the fewer the viscosity problems caused by soot.

Recent research by Petro-Canada Lubricants has shown that soot dispersant performance is enhanced by the purity of the base oil.

“Ultra-pure base oils can help improve soot dispersion efficiency, helping to maximize the effectiveness of soot controlling additives,” says John Pettingill, DURON product specialist, Petro-Canada Lubricants. “This is good news for maintenance managers because when soot is well dispersed in an engine oil and the lubricant is able to retain more of its fresh oil properties, engines are better protected no matter the weather. And fleets can confidently attain additional cost saving benefits, such as extended drain intervals.”

### **Putting a freeze on unnecessary downtime**

Extreme weather and unfavorable road conditions often create added downtime and unwelcomed work

interruptions. Stopping for change-outs and avoidable maintenance repairs is additional downtime that today’s fleets can’t afford, and shouldn’t have to.

Having a lubricant that lasts longer is especially important when your trucks are on the road an average of 15,000 miles per month.

From its base in Chickamauga, Georgia, Gann-West Trucking hauls freight all over America. Going from the southeast to points north and west with a mixed fleet of Cummins, CAT and Detroit Diesel engines, posed the problem of which oil to use.

“DURON-E allowed us to put the entire fleet on one lubricant,” says vehicle fleet manager Lamar Gann. “It does a great job of lubricating our engines and minimizing soot agglomeration, which helps keep our engines clean.”

It’s a sentiment shared by another trucking company thousands of miles away in Winnipeg, Manitoba. With a fleet of over 1,000 transports traveling across the continent, Bison Transport needed an engine oil they could count on for cold weather

start-ups and long terrain durability.

“When vehicles are shut off overnight, they have to start up in the morning for the safety of my drivers,” says maintenance director Itamar Levine. Due to the extremely cold climates, drivers need to be able to start their engines after an overnight rest so they don’t freeze to death. “Our entire fleet runs on DURON-E Synthetic 10W-40 – it’s a great all-weather solution.”

### **Fight soot year-round**

What ever the weather or operating condition, soot is a constant threat to engine performance and reliability.

“You can never really produce less soot; it’s all about how you handle it,” says Pettingill. “It all comes down to the additives and how they synergize with the base oils.”

A lubricant that is formulated from the purest base oils and high quality additives is less likely to thin out in hot weather or thicken in cold temperatures. Instead of changing grades as the seasons change, fleets are better off staying with a lubricant that maintains its viscosity – and fights soot – all year round. **MM**

# SOOT IS CUTTING INTO YOUR PROFIT

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ENGINE WEAR AND SLUGGISH PERFORMANCE.  
ARM YOURSELF WITH DURON.**



DURON™-E – the leading soot-fighting formula in the industry. It seeks out soot particles and isolates them before they can join forces. And if they can't cluster, your engine is defended from damage.

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It's proven to handle up to 2x more soot\* while maintaining its viscosity; protecting engines from wear, extending drain intervals, maintaining peak fuel economy, and reducing maintenance costs for fleets – even in the heaviest soot conditions.

That keeps costs down over the long haul and extends the life of your engines.

**Get the most from your fleet. Learn more at [fightsoot.com](http://fightsoot.com)**

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\*Based on MACK T-11 Enhanced Soot Control Test results. DURON-E Synthetic 10W-40 performed 2.2x better than CJ-4 requirement, while maintaining viscosity level.

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# STOPPING ON A DIME

Stopping distances are shorter,  
but there is a price to be paid

By John G. Smith

Recent changes to Federal Motor Vehicle Safety Standards redefined what it means to stop on a dime. The allowable stopping distance of a 6x4 tractor was slashed by 30%, requiring new trucks to stop within 250 feet when travelling at highway speeds - and that meant several changes to related components.

Front S-cam brakes were equipped with larger friction material and Type 24 brake chambers replaced Type 20 models. This delivers 20% more force into a wheel end, says Gary Ganaway, director, marketing and global customer solutions at Bendix Spicer Foundation Brake. "The materials themselves have changed drastically," he adds.

Joe Kay, director of engineering at Meritor, admits that meeting the new targets required more work than many manufacturers expected. "We wanted to make sure we didn't upset the system."

The new standards were met, but the added stopping distance came at a cost - and not just in the form of higher purchase prices.

Todd Cotier, maintenance director at Hartt Transportation, refers to one example in the form of added weights that came with his fleet's shift from 7-inch friction material to 16.5x8-5/8-inch models. The larger shoes and drums have added an unwanted 106 lbs. "We spend thousands of dollars in our fleet to take pounds off. (Now) we have to find another avenue to reduce our vehicle weight," he says.

The added maintenance needs were on top of that.

Dry rollers had to be lubricated, and those that developed premature flat spots had to be replaced. In some cases he found that return springs were being installed backwards, causing them to rub against the hubs. Hartt's tire life dropped 10-25%, depending on the application. The new brakes on steer axles also tended to chatter because of the added torque.

There were some maintenance benefits. The reduced stopping distance (RSD) friction materials lasted 22% longer than their predecessors, Cotier says, referring to his fleet's experience with 160 vehicles.

But the shorter stopping distances place a new focus on replacement parts.

"This is probably the biggest change in braking since non-asbestos materials," Ganaway says. "It is extremely important to reline with certified replacement parts."

A tractor equipped with RSD brakes will shoulder more of the stopping forces if trailers are fitted with lesser material, Kay notes. "A two psi difference in pressure between the tractor and trailer can really shift that work load."

A four-digit code that is printed on the outside edge of the friction material, or attached with a label, will identify products that meet the new standards. And Ganaway stresses the need to ask sup-

pliers to prove that material has been certified. Bendix, for example, lists all of its RSD-certified materials.

Earning an RSD label is no easy feat. Kay refers to 30 procedures used to test the friction material, covering everything from noise and vibration to low-energy stops, brake drags, hard stops and wear. From a functional point of view, manufacturers have to manage road vibrations, hardness, thermal properties, consistencies and more.

Even the material's pH level had to be controlled to offset acidic reactions caused by hot drums. "It sounds like that was a positive influence," he says.

"It's an expensive proposition to maintain a vehicle at the OE level,"

Ganaway admits. The question is how manufacturers can "cost optimize" to make the choices more palatable for fleets.

The learning curve has not been limited to maintenance shops, either. Drivers, long trained to gently feather their brakes, have to be encouraged to push the pedals harder. "Don't be worried to hammer on the brakes," Ganaway says. "The new formulations actually enjoy the work."

And the work on brakes has hardly stopped.

"Are we done? No," Kay says, referring to goals ranging from longer component life to reduced noise. "We've got a lot of stuff happening on the brake side and the friction side." **MM**

## TECH TIPS

### LOWER REPAIR COSTS BY KEEPING SOFTWARE UP TO DATE

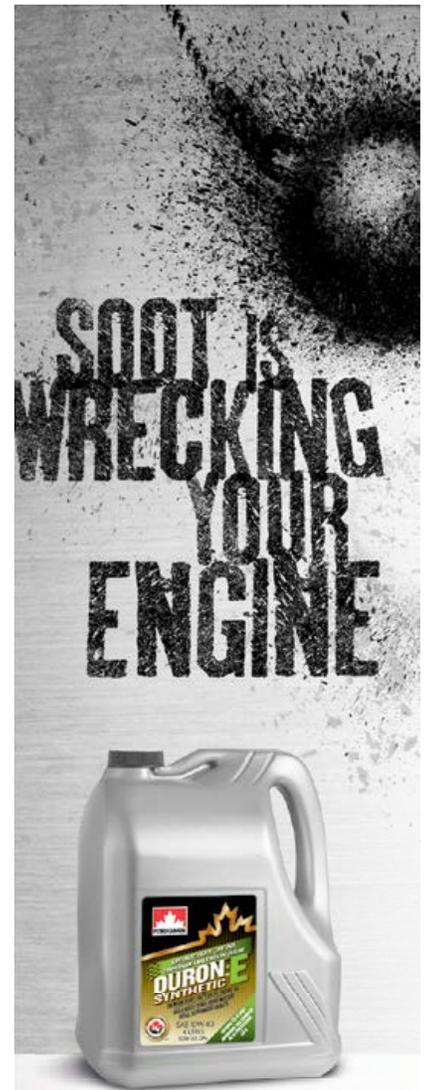
One way to reduce downtime is to stay current with software updates provided by the OEMs. At the Technology & Maintenance Council meetings' popular Fleet Talk discussion, maintenance managers spoke to the importance of getting the software updates installed on a regular basis.

One shop manager said doing so has drastically reduced DPF regeneration issues. If you perform maintenance in-house, the software updates are easy to install and should be done every time the truck comes into the shop.

Fleet managers said they visit the OEM Web sites regularly, looking for new updates.

Performing the updates during scheduled preventive maintenance is one option, but at TMC it was said the preferred method is to update them every time the truck visits the shop.

And, "if you're not doing your own maintenance, any time you're in or close to the dealer, get it done," one maintenance manager urged. "Most fleets are doing updates at PM time but very few every time the truck comes into the shop... With re-gen issues, we've been able to mitigate a lot of that by staying as current as we possibly can with those software updates."



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# THE TOOLBOX

## Truck-Lite provides online technician training

If you want to brush up on your lighting skills, Truck-Lite is offering an online series of technical courses as part of its new Truck-Lite Training Institute.

The program offers web-based lessons intended for distributors, technicians and fleet personnel who sell, use and maintain equipment with Truck-Lite products. The user can stay up to date on the most recent developments in heavy-duty lighting and visibility systems, Truck-Lite claims.

The first series to launch is the Lighting and Harness module. It includes courses on: basics in electricity; lighting evolution; lighting fundamentals; LED lighting performance; harness fundamentals; and regulations.

Each module includes a test. When a user completes all the courses, they'll receive a certificate of completion, the company announced.

Visit [www.truck-lite.com/tti](http://www.truck-lite.com/tti) for more information.

## Eagle Hook protects trailer techs from falls

Johnathan Sousa of Sousa Truck Trailer Repair is marketing a new fall restraint system designed for trailer technicians. The system allows technicians to safely navigate trailer rooftops, to conduct repairs on roofs and corners, while staying safely out of harm's way.

The Eagle Hook system was officially launched at this year's Truck World show. It also allows operators to safely remove snow and ice from trailer tops, Sousa says. He bills it as the only fall restraint system designed specifically for trailers. Technicians can enjoy a full range of motion while conducting repairs, while staying away from the roof's edge.

"We've had it in our trucks for the past two years," Sousa said. "It was made by mechanics, for mechanics."

It retails for about \$2,350 and comes with an online training program. For more details, see [www.EagleHook.com](http://www.EagleHook.com).

## Oil Eater cleaner available in 1.5-ounce packets

Kafko International is now offering Oil Eater floor cleaner in pre-measured packets, which when diluted, produce 2.5 gallons of eco-safe cleaner that can be used to dissolve grease and oil from floors and walls.

The company says its new Oil Eater offering, which comes in 1.5-ounce concentrated packs, is ideal for truck maintenance facilities and terminals.

The biodegradable cleaner is acid-free, non-abrasive, non-corrosive, non-flammable, non-toxic and free of petroleum solvents. It can be ordered in a case pack consisting of 100 packets or in 100-lb kegs. Samples are available upon request. For more details, visit [www.OilEater.com](http://www.OilEater.com).



# OX



## Meritor expands availability of tire pressure inflation system option

Meritor has announced the control box check point option, previously available on a limited basis with the Meritor Tire Inflation System by PSI, is now available with any MTIS by PSI system on new trailer installations and retrofits.

The option offers technicians and drivers the ability to check the regulated air pressure at the control box without shutting off the system and disconnecting the supply line from the control box.

The control box air pressure is set slightly higher than customers' specified tire pressure. This is done by design, Meritor says, so the system delivers the desired pressure to the tires after passing the check valves.

The MTIS by PSI system keeps trailer tires properly inflated, increasing uptime and reducing maintenance management, the company says.

For details, visit [www.psi-atis.com](http://www.psi-atis.com).

## Webb Wheel introduces cooler-running brake drums

Webb Wheel Aftermarket has come out with a new Webb Vortex unlimited brake drum, featuring cool-running technology (CRT).

The brake drum features patent-pending CRT vents that increase air flow, producing 15% cooler operating temperatures for better braking performance and 25% longer drum life, the company claims.

The system features external cooling ribs that conduct heat away from the brakes as well as vents that provide greater heat transfer efficiency. They also offer wear indicators that take the guesswork away from repairs, reducing labour time, the company says.

The new Webb Vortex drums with CRT vents are available for most popular axle applications. For more details, visit [www.WebbWheel.com](http://www.WebbWheel.com).



## DID YOU KNOW

**T**he Ontario College of Trades will be ramping up enforcement, to ensure that the province's coach and truck technicians are properly trained and qualified.

That was the warning issued by the Ontario Trucking Association's Rolf VanderZwaag, when speaking at the Canadian Fleet Maintenance Seminar in June.

Enforcement officers representing the College of Trades have done 7,084 field inspections to date, but they've been focusing on education, VanderZwaag said. That could soon change.

"Right now they're coming in the front door. Soon they'll

be coming in the back door and they won't be announcing themselves and they will be asking for qualifications from your people, to be working in your shops," VanderZwaag warned.

Among the things they'll be looking for are technicians guilty of professional misconduct, for doing things such as issuing PMVI stickers without conducting a proper inspection.

As of June 1, there were 30,969 truck and coach technicians registered by the College of Trades in Ontario. The average age of technicians is 52 years, while apprentices average 30 years of age. There are currently 3,200 truck and coach apprentices in the province.