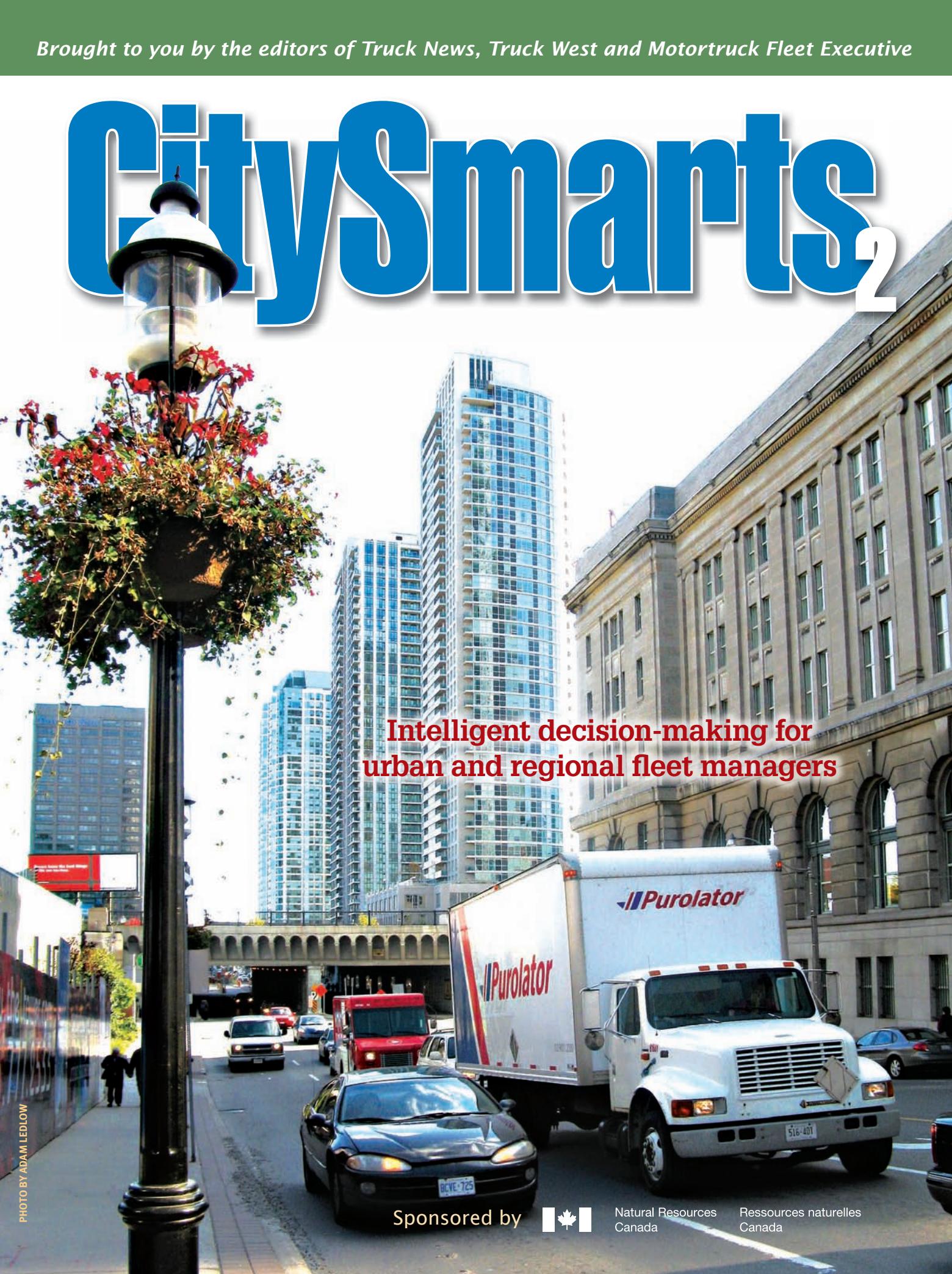


Brought to you by the editors of *Truck News*, *Truck West* and *Motortruck Fleet Executive*

CitySmarts²



Intelligent decision-making for
urban and regional fleet managers

PHOTO BY ADAM LEDLOW

Sponsored by



Natural Resources
Canada

Ressources naturelles
Canada

Versatility



Built for your business, Hino trucks start with a simple and efficient design that is ideally suited to your application. From Class 4 to 7, Hino trucks are available in a variety of frame lengths with standard and optional equipment to suit your needs.

For 35 years, Hino has built a strong reputation for durability, performance and owner loyalty in Canada. Count on Hino to deliver the reliability and value your business demands in today's World.



Customers Drive Our Success.

Visit Hino Canada at www.hinocanada.com for additional information, or visit your closest Hino dealer.



NATURAL RESOURCES CANADA's ecoENERGY for Fleets (FleetSmart)

is pleased to continue to support this publication, providing service to the medium-duty market in Canada. FleetSmart's family of driver training programs includes SMARTDRIVER in the City, a program that focuses on the light and medium duty driver. This complements the efforts of Natural Resources Canada through its ecoENERGY for Fleets program that continues to introduce fleets to energy-efficient practices that can reduce fuel consumption by offering free practical advice on how energy-efficient vehicles and business practices can reduce fleet operating costs, improve productivity and increase your competitiveness.

Visit: www.fleetsmart.gc.ca
for more information.

Become a FleetSmart Member
Join now - it's FREE!

Smart decisions require insightful information

Private, regional and city trucking combine to make up the quiet Goliath of the Canadian trucking industry. While their over-the-road counterparts capture most of the government attention and much of the media spotlight, the private and government municipal and regional fleets make up a large and important component of the Canadian trucking community.

While the for-hire transportation industry itself accounts for about 3.7% of economic output as measured by gross domestic product, when private transportation services are included, the contribution of the entire transportation sector rises to 6.3%. Truck and delivery van services dominate such "own-account" transportation, accounting for nearly 89%.

Not only do the private and municipal or regional fleets that ply our nation's city infrastructure have an important role to play, they also have equipment and informational needs distinctly different from their over-the-road cousins. Having easy access to the information necessary to formulate sound management strategies can be difficult, however, when the primary focus of the business is on the product or service it provides rather than the trucks necessary to deliver it.

That is the reason we launched City Smarts last year and why we have continued with it this year. It is designed as a guide to help private and municipal and regional fleet managers make more informed and strategic decisions in a variety of areas ranging from spec'ing components to managing safety and green practices.

In this year's issue, you will find information about the latest emissions standards and how they will affect medium-duty truck buying practices; driving practices no sound safety plan should be without; a primer on the ins and outs of ergonomic city driving; and everything you need to know to make a smart decision when buying tires for city or regional applications. In addition, we have pulled some highlights from our research on private fleet practices. More information is available in the City Smarts module on www.trucknews.com.

We trust the information provides the fleet managers in this sector with an insightful and rich source that will help in their every-day decision making.

Lou Smyrlis
Editorial Director
Transportation Media

CONTENTS

- 4
- 6
- 7
- 9
- 10
- 12
- 14

MEDIUM TRUCKS, BIG DECISIONS

How will you comply with the US Environmental Protection Agency's crackdown on diesel engine emissions?

IT'S NO ACCIDENT

Is your safety program good enough to keep your fleet out of trouble?

SAFE CITY DRIVING TIPS

Thorough pre-trip inspections are extremely important, especially in the winter.

SMART DRIVER IN THE CITY

How training for urban fleet drivers can cut costs and reduce emissions.

MAKE CONTACT, AVOID IMPACT

A primer on the ins and outs of ergonomic city driving.

TREAD AND THE CITY

How to spec' tires for urban applications.

INSIDE THE NUMBERS

A look at some of the important numbers driving private fleet operations.



Medium-sized trucks, BIG DECISIONS

Once again, the US Environmental Protection Agency is cracking down on diesel engine emissions. But this time **YOU** choose how to comply.

BY JAMES MENZIES

First the good news: Medium-duty trucks built after Dec. 31 will be cleaner than ever, in some urban centres possibly even churning out cleaner air than they suck in. Now for the bad news: Clean doesn't always come cheap, and you'll be expected to pay considerably more for new medium-duty trucks in 2010 and beyond.

The US Environmental Protection Agency's (EPA) latest emissions standards come into effect Jan. 1 and this time target harmful oxides of nitrogen (NOx). The EPA2010 standard calls for about a 90% reduction in NOx from today's levels, to 0.2 g/HP-hr. But unlike past rounds of EPA emissions crackdowns, the medium-duty truck market will offer two competing technologies to meet the new standard.

Most players, including Cummins, Hino, Isuzu and Paccar, will be introducing a form of exhaust aftertreatment known as selective catalytic reduction (SCR). The system consists of an SCR catalyst and a separate tank that houses a urea/water mixture now called diesel exhaust fluid (DEF). DEF is injected in small doses into the exhaust stream, creating a chemical reaction within the SCR catalyst that converts NOx into harmless nitrogen and water vapour. SCR will be combined with previous emissions-fighting technologies such as a diesel particulate filter (DPF) and cooled exhaust gas recirculation (EGR); although EGR flow rates can be reduced allowing manufacturers to better program their engines for optimum fuel efficiency.

SCR is already widely used in Europe and other parts of the world and has been extensively tested here in North America. Proponents of SCR say fuel economy improvements will provide value for truck operators.

"The use of cooled EGR and SCR offer a substantial fuel economy improvement – up to 9% over an in-cylinder solution," declared Jim Cramer, 2010 ISB technical program leader with Cummins, when unveiling the company's 2010 mid-range product line earlier this year. "With the use of SCR, we're able to tune the combustion recipe in the engine to dramatically reduce DPF regeneration. That means less fuel and greater simplicity in operations for our customers."

(Cummins has planned all along to use SCR on its mid-range products, but initially pursued an in-cylinder solution for its heavy-duty engines. Months into development, however, Cummins changed course on the heavy-duty side and decided to pursue SCR for all its 2010 on-highway products. It should be noted that its claims of a 9% fuel advantage is based on its own findings in exploring an in-cylinder solution of its own and that most OEMs using SCR are promising a more restrained fuel economy advantage of about 5%).

Customers of SCR-equipped trucks will have to monitor DEF fluid levels and fill the tank when required. Otherwise, the engine will be de-rated and will eventually refuse to start until DEF has been added.

An extensive DEF distribution network has quietly been taking form in the months leading up to 2010 and the fluid is already available from many suppliers. The very first US truck stops to offer DEF 'at-the-pump' have already gone live with DEF fuel island dispensers, but here in Canada it will initially be more readily available in tote jugs of various sizes and in bulk from distributors, truck stops and truck and engine dealers.

A recent study by Quixote Group Research suggested that 71% of Class 3-5 vehicle operators refuel at truck stops and service stations and will likely purchase their DEF there. However, more than 80% of government fleets handle fueling, maintenance and fluid refills in-house at their own facilities, so they may be more likely to purchase their own dispensing equipment and bulk quantities.

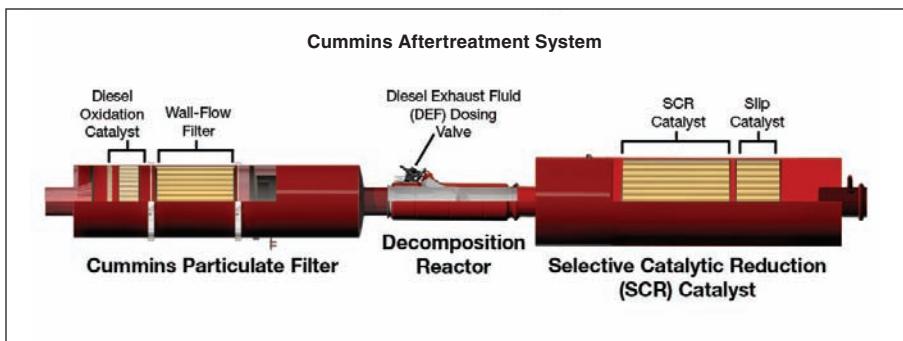
Suppliers are offering DEF in a wide range of container sizes as well as in bulk to make filling up more convenient. However, in most applications, DEF top-offs will rarely be required.

Cummins Filtration's Web site (www.cumminsfiltration.com) offers a handy calculator that shows just how much DEF you'll require based on your operating conditions.

A medium-duty truck will consume DEF at a rate of about 2% compared to diesel (two gallons of DEF for every 100 gallons of diesel). Averaging 8 mpg over 80,000 km per year, that truck would consume 125 gallons of DEF and require just 13 fill-ups based on a 10-gallon DEF tank.



A blue cap on DEF tanks will eliminate confusion about what fluid goes where.



Cummins' selective catalytic reduction (SCR) catalyst and diesel particulate filter (DPF) will combine to eliminate practically all PM and NOx emissions.

The DEF tank size varies by OEM. In Hino's case, the tank is only 4.7 gallons, which still allows for about 4,000 kilometres of driving between fill-ups.

While keeping DEF levels topped off may not be all that onerous, Canadian medium-duty market share leader Navistar International would prefer not to impose that burden upon its customers and has instead opted to avoid exhaust aftertreatment altogether. Unlike its competitors, it hasn't already developed SCR technology for other global markets and it felt the task of finding and buying DEF is something its customers would prefer not to worry about.

"For the first time, emissions (control with SCR) is not passive, it requires customer involvement and driver involvement and all things being equal, we thought customers would prefer not to be involved," said Tim Shick, director of marketing with Navistar's engine group. "The whole idea of reduced customer involvement is even more attractive in medium-duty markets, where the truck is a tool rather than being the business."

Shick also pointed out customers will appreciate the fact that by avoiding

SCR, Navistar International is able to keep the frame rail space clear for body builders. SCR components such as the catalyst and DEF tank, on the other hand, do occupy valuable space along the frame rails which can be a hindrance if you want to add certain body types or components.

So how exactly is Navistar going to comply with EPA2010 emissions standards without the use of SCR? It seems simple on the surface: Navistar plans to ramp up EGR levels by about 10%, routing greater amounts of cooled exhaust gas back into the cylinder to cool the combustion process, eliminate oxygen and discourage the formation of NOx in the cylinder itself.

While it seems simple, every increase in EGR rates brings a corresponding degradation of combustion efficiency.

"The challenge in EGR is how do you get that efficiency back?" Shick admitted. The answer, he said, lies in the use of a high-pressure common rail (HPCR) fuel system that optimizes fuel pressures and makes fuel more burnable in a low-oxygen combustion environment.

"The high-pressure common rail

fuel system gets around that issue of reduced efficiency by making fuel more burnable," he explained. Increasing EGR levels also increases heat rejection, but Shick said Navistar is able to handle that by increasing the cooling capacity and moving to a slightly larger radiator.

Regardless of whether you prefer the fuel economy benefits of SCR or the simplicity of what Navistar dubs 'Advanced EGR', you can expect to pay more for new trucks after New Year's Day. Both SCR and Advanced EGR cost untold millions – if not billions – to develop, which begs the question: What's all this going to cost you? The pricing picture has become clearer in recent months.

Hino has announced a \$6,700 (all figures US) price increase for 2010 trucks; medium-duty Freightliner trucks with the Cummins ISC8.3 and ISB6.7 will be slapped with a \$7,300 and \$6,700 surcharge respectively; and mid-range International engines including the MaxxForce 7, MaxxForce DT, MaxxForce 9 and MaxxForce 10 will each be slapped with a \$6,000 price increase. (Paccar has yet to announce pricing for its 2010 PX-6 and PX-8 engines). In most cases, the cost increases are being passed along as a 'non-negotiable' emissions surcharge, so they're pretty much unavoidable.

CS2

James Menzies is the executive editor of Truck News and Truck West magazines, and a frequent contributor to Motortruck Fleet Executive. In addition to his many writing awards, Menzies holds a commercial drivers' licence and has co-authored a book about trucks from around the world.



humberview TRUCKS ISUZU

NEW '09 GMC W5500 HD

with 18' Aluminum Van Body, Isuzu Diesel, 6 spd. Auto, A/C, P/W, P/L, Cruise, AM/FM CD, Heated Mirrors, Hyd. Brakes, 19,500 lbs GVWR, 10,000 lbs payload**, Roll-up Rear Door, Hardwood Floor, plus more...
Stock# IZ95491

*All prices are plus Freight, Air Tax, Admin.Fee, GST, PST & Licensing

** Weight of driver, fuel, body & other added on accessories must be deducted from payload shown



- Fuel Efficient Diesel Engines
- IN STOCK with or without Bodies

\$52,999*

**SAVE
\$4,500.**

compared to 2010 models

416-233-9262

60 Fieldway Road, Etobicoke Ontario M8Z 3L2 **1-888-741-0031**

humberviewtrucks.com

It's no accident

Safe driving practices for city fleet drivers don't just happen.

Is your safety program good enough to keep your fleet out of trouble?

BY HARRY RUDOLFS

Most city fleets have given some thought to safe driving practices and training, and may even have some sort of safety program in place. But their system might be outdated or neglected, or buried in a filing cabinet somewhere. Things seem to be going along smoothly, day-to-day operations take up most of the time, and management and drivers become complacent about safety – until something goes wrong.

A city fleet with an inadequate safety program is asking for trouble. According to Rick Geller, director of safety and signature services for Markel Insurance, the average fender bender costs \$12,600, while most transport providers carry a \$25,000 deductible policy. That means every collision or incident, no matter how insignificant, takes a big bite out of the revenue stream. Besides downtime and service disruptions, a couple of minor collisions in a short period of time can handcuff a small business. And the kicker is that those collisions could probably have been prevented.

Geller thinks the payback for running defensive driving courses and safety programs can be seen in a very short time. "Our experience has been that by providing drivers with defensive driving training, we typically see a 50% drop in crash costs within two years."

Great fleet driving records don't happen by themselves. Best practices and training regimens have to be instituted and monitored. The very best companies offer a range of methods to reduce accidents and get their mes-

sage across. Defensive driver training may be at the core of a good program, but there are lots of other pedagogical tools available, from online learning, to ride-alongs, and peer mentoring and simulator training. A comprehensive fleet safety program should be tailored to fit the needs and risks encountered by your fleet.

But first you have to know what you need. The Transportation Health & Safety Association of Ontario (THSAO) provides a free online checklist that can help you take inventory. Go to www.thsao.on.ca and click on the "links" at the top of the page. Then click on Health and Resource Materials and finally under the heading "Preventing Work Related Roadway Conditions" where you'll find four self-assessment documents that can be very helpful.

Due diligence can start with something as simple as checking drivers licences and running abstracts. Who drives for your company, what do they drive and how far do they go, how many stops and what kind of traffic conditions and which drivers are subject to the most exposure and risk? An employee who picks up supplies once a week won't need the same training as someone doing multiple drops and pick-ups in a congested urban area, although they would probably both benefit from a defensive driver course.

If your fleet is domiciled in Ontario, you can drop off the assessment and someone from THSAO will go over it with you (if you're out of province, it's still a good tool). "Some fleets who have a very good program in place,

we might suggest small changes," says Michael Burke, CEO of the THSAO. "We feel it's important for fleets to develop their own programs,"

One company that's worked closely with THSAO in creating their own in-house program is Purolator Courier Limited, who completely revamped their 10-year-old defensive driving program in 2008.

Doug Pinto oversees the program for 4,200 drivers Canada-wide. "Before, it was really good, but it focused more on how to drive our trucks. We added a little bit more theory as well, that helps the employees understand the why and the how."

Applicants to the P&D division have to score 80% on a written test and take a practical test that involves parallel parking and driving and reversing a step van through a series of narrowing traffic cones. New hires are given a one-day defensive driving course as part of their orientation. Purolator drivers are also subject to recertification by company trainers or unit managers every three years.

"Backing and low speed accidents are the kind of thing we focus on," says Pinto. "We have trucks driving in enclosed areas, into docks that may not be made for trucks to access. Low speed backing accidents, sideswipes, hitting fixed objects, all can be eliminated."

Complacency is another factor that safety managers have to grapple with. You may have hired excellent drivers, but over time their performance gets sloppy and they unknowingly adopt

Continued on page 8

Harry's safe driving tips for city driving

Thorough pre-trip inspections are extremely important, especially in the winter.

- Make sure your fluids are topped up. It's also a good idea to carry an extra jug of windshield washer anti-freeze. Check your coolant level as well. Don't leave the yard without the glycol level up to the cold mark at least. The coolant transfers heat to your cab and defrosters and you'll freeze if the level is too low. But a full radiator can keep you warm on a frigid day.
- Make sure the defrosters are working and check your windshield wipers. It's a good idea to carry an extra wiper, even an old one. You never know when you'll need to replace it. Wipers get ripped up and shredded during the winter.
- Defensive driving is pretty well the same no matter what course you take, and many are available online. Most of them stress the concept of space-cushion management. The most simple way to apply this is leaving a second of space for every 10 feet of truck length. A standard five-tonne should leave three seconds of space between the vehicle being followed no matter what speed. A 53-ft. trailer should leave at least six seconds of space. Double this on wet roads and triple it on ice and snow.
- Other important aspects of DD involve looking ahead to anticipate problems before they occur. Get the big picture; your gaze should never be still for long. Keep your eyes moving and constantly scan the mirrors and blindspots.
- Backing accidents are the most common and preventable in the trucking business. One simple remedy is contained in the acronym GOAL: get out and look. The best way to avoid overhead obstructions and fixed objects is to know where they are before reversing.
- Recently, I've found having a GPS in the truck has saved me a lot of time and needless U-turns and frustration (legal for drivers in Ontario as long as it's securely mounted). As city drivers know, many of the calls we service are poorly marked and addressed. GPS units can enhance route planning which makes for safer, more efficient driving. This device can also suggest what routes to take. It also tells you what side of the road the call is on. Having your vehicle set up properly when approaching a loading dock is safer for everyone.
- Vehicle avoidance systems are getting some interest from P&D fleets, but they're no substitute for good driving skills. One shouldn't be reliant on electronics or rear view cameras, but any device that can help avoid collisions is probably a good idea.
- Simulator training. Some trucking companies like Bison of Winnipeg have had simulator training as part of their safety program for years. The good thing about simulators (and skid schools) is that you can try manoeuvres and even nightmare scenarios without doing any damage to vehicles or people. DriveWise of Barrie has a very sophisticated L3 simulator that can be set up to mimic any transmission, vehicle configuration or make of truck.
- Lastly, a safe driver is an environmentally friendly one. Leaving lots of following distance, anticipating signal light changes, and avoiding jack-rabbit stops and starts can save money at the fuel pumps. Drivers should also be aware that almost all idling is unnecessary. As the expression goes, "turn the key, and stay idle-free."

poor habits. After several years of safe driving, a driver might suddenly have two or three preventable collisions in a short period of time.

"One question I always ask carriers is, how many drivers working for you today would you rehire if they were rehired," says Geller. "Then I ask them, what is your process to annually re-qualify those drivers...and if they no longer qualify, what are your plans in terms of remedial or refresher training?"

Geller makes two good points in the above statement. Your hiring process has to be impeccable so you have good people working for you in the first place. And safety training is a process that needs to be continuously ongoing.

"You don't need to fire people, you need to train people," says Ken Brown, safety and compliance manager for GA Foss Transport. "Without training, we can't get any better. All new hires go for one day FACTS (a Markel defensive

driving program). If they have an accident, whether it is preventable or non-preventable, they go back and repeat the DD course. Then a driver evaluation is done. We will then figure out from there what training is needed."

Brown's drivers deliver petroleum in tankers to gas stations in some of the most difficult places possible, including congested urban environments. They undergo a minimum of one month training before they're sent out solo. Much of the training, of course, is concerned with safety issues that arise on the job. "We do extensive on-job training and on-paper. This is the stuff that will make you money in the long run. It's a slow process, but it will pay for itself as time goes on," he says.

Fleets with great safety records are proud of their rigorous programs. John Dennehy, transport and compliance manager for Sysco Foods, looks after about 175 drivers across the province working out of terminals in Toronto, Milton, Sturgeon Falls and Kingston.

He admits his drivers work in some of the most challenging environments. "Everything is delivered by hand by a ramp at the back of the truck, or a tailgate if you're lucky enough to have one: backing into alleyways, parallel parking, double parking, up and down stairs; we do it all."

The company's newly-hired drivers get six weeks of training and an annual one-day defensive driving course based in part on the Smith System. The day's training includes 2.5 hours of classroom time and 4 hours driving, where drivers get coached and practice techniques in a mini-van and then critique each other.

Sysco's delivery trucks are equipped with satellite communications systems and black boxes that send messages to Dennehy's BlackBerry if any sudden decelerations occur. The GPS system will tell him where the incident occurred and what speed the vehicle was moving. Drivers also have the option of hitting a

Cool Delivery Choices...

www.reefersales.com
info@reefersales.com



DIESEL ENGINE POWERED
for 12'-28' Bodies
Supra Models 550 to 950
-20°F to +60°F

Carrier
TRANSICOLD



For the PRODUCT

TRUCK ENGINE DRIVEN
for Van and Bodies up to 20'
30S 40X 50X Models
Produce • Flowers • Frozen Foods



DIESEL MULTI-TEMP SYSTEMS
Same Cargo Area
Different Temperature Control
Genesis and Supra Models

CLIMA CAB

For the DRIVER

ALL-ELECTRIC APU
POWERED A/C

Bunk & Cab
Applications

4 Year Odyssey
PC2150 Battery
Warranty



EPA Verified
CARB Compliant

NO FUEL • NO IDLING • NO EMISSIONS

8000 BTU's of cooling for over 12 hours

Reefer Sales and Service
425 Gibraltar Drive
Mississauga, ON L5T 2S9
(905) 795-0234
Fax (905) 795-0018

Atlantic Carrier Transicold
125 MacNaughton Ave.
Moncton, NB E1H 3N3
(506) 388-6000
Fax (506) 388-6001

Reefer Sales and Service
624 Arvin Ave.
Stoney Creek, ON L8E 5P1
(905) 643-0199
Fax (905) 643-0089
(formerly L&J Refrigeration)

panic button which will immediately alert him if there's an emergency.

Erb Transport of Baden, Ont., with terminals in Ontario, Winnipeg, Quebec and Pennsylvania, is another carrier that's extremely proud of its safety record and its safe driver program. And they have been recognized as the safest fleet in their division by the Truckload Carriers Association.

But they didn't get that way by accident (no pun intended). Besides an in-house DD course based on Markel's FACTS program, the Erb Group takes a many-pronged approach to safe driving and uses technology to its advantage.

One component is the pro-TREAD truck training program where drivers can log on and complete modules at their leisure. The modules cover different aspects of truck transport and specific units can be assigned to drivers depending on their job requirements.

With 139 straight trucks and 250 tractors, director of safety Tom Boehler can access information on each driver through the Turnpike Global system which constantly downloads data from trucks as they are going about their deliveries. Information on a driver's performance includes speed, idling, fuel consumption and hard braking. "We have a bonus system called Pro-Drive where drivers can earn up to 2% of their wages each quarter," says Boehler. "We were able to benchmark the fleet and establish a benchmark of 78% for our top performers. Drivers that perform about that standard are eligible for the bonus."

The Erb Group pays among the lowest insurance premiums because of its low accident rate, but Boehler is anxious to get it even lower. "We're down to the little stuff nowadays, fender and mirror scrapes. To reduce those accidents, we have to fine-tune our program and driver behaviour. It's all in the attitude of the culture you build."

CS2

Harry Rudolfs is an on-road editor with the Transportation Media family of magazines with almost two decades of experience writing about the transportation and logistics industry. He is also a professional driver.



Why SmartDriver in the City will help your business

SmartDriver in the City training material can help you reduce costs, protect equipment, and retain drivers. Each of the recommended techniques has already been tried and tested by a fleet like yours. Consider the following benefits:

1. Lower fuel bills

Research has shown that skilled drivers can be 35% more fuel-efficient than their counterparts – and that can translate to your bottom line.

2. Control wasteful idling costs

If an idling vehicle wastes four litres of fuel per day, related engine damage and shortened oil drain intervals will add to those costs.

3. Reduce collisions

A smart driver is a safer driver.

4. Lower maintenance costs

Drivers learn the value of inspecting and maintaining fluids, tires, brakes, and filters.

5. Avoid fines

SmartDriver in the City discourages the speeding, aggressive driving habits, and excessive idling that can lead to traffic tickets.

6. Enhance your corporate image

By encouraging fuel-efficient driving techniques, you will play a key role in reducing the smog that coats our cities, greenhouse gases that could lead to climate change, and particulate matter that has been linked to respiratory disease.

7. Keep your employees healthy

Smart drivers learn the importance of a proper diet, seat adjustments, and sleeping habits that will keep them vigilant behind the wheel.

8. Retain employees

Smart drivers will appreciate training that enhances their skills.

9. Enhance existing training efforts – for free!

SmartDriver in the City training sheets, known as SmartTalks, can be easily incorporated into existing training manuals.

10. Promote trip planning

SmartDriver in the City promotes the need to stick with established route plans, and teaches drivers how missing a single turn could add 3 km to a delivery.

SmartDriver in the City is available free of charge from Natural Resources Canada. Go to www.fleetsmart.nrcan.gc.ca for more information



Make contact, avoid impact:

A primer on the ins and outs of ergonomic city driving

BY JULIA KUZELJEVICH

City driving, P&D, and regional hauling have their own particular sets of hazards: more contact with pedestrians and four-wheelers, delays because of interrupted traffic flows, and, of course, the hazards that come with a lot of in-and-out, back-and-forth movement for drivers.

While long-haul truck drivers can suffer from rotator cuff injuries, shoulder pain, and sciatica when they are sitting for long periods of time or frequently changing gears, city and regional drivers can face several other health-related issues specific to the tasks they perform.

According to Dr. Christopher H. Singh, a chiropractor with Trans Canada Chiropractic, some of the most common injuries among these drivers are lower back sprains and strains in drivers who do LTL and who are required to “hand bomb” loads, soft tissue (muscle/ligament/tendon) injuries, hip and knee injuries due to excessive clutch operation, and tension headaches due to stress-related muscle tension in the shoulders and neck.

“This is due to driving in heavy traffic in the cities,” said Singh.

Registered massage therapist Sabrina Marrello says that hamstring, upper arm and wrists (from heavy lifting) and upper shoulder-area injuries are also common among these drivers.

“Even something like wearing your wallet in your back pocket can cause imbalance to the lower back, resulting in back pain,” she said.

She also noted that if you are wearing safety boots that are worn out, you should replace them as frequently as possible, because a shoe or boot imbalance could also cause knee pain.

When getting in and out of a truck, she said, it’s important to remember to hold the grab handle of the vehicle, and to avoid gripping the steering wheel or seat, which could cause a pull injury.

“Do not jump out of the cabs or off of the trailer. Use a proper three-point technique (three points of contact between your body and the vehicle) when doing either,” said Singh, who noted that many injuries are due to careless mistakes that occur when a driver is rushing.

If you are frequently lifting boxes, said Marrello, and have access to a lifting belt, this provides a great deal of support to the lower back.

“Lift facing the object you are lifting, and squat, using your knees. Don’t lift and shift to the side,” she added.

Using the legs, not the back, is indeed proper form when lifting freight, said Singh.

Using proper posture and not slouching while sitting in the truck also helps avoid placing more pressure on the spinal joints and soft tissues, he said.

Packing your own food, he added, has a role to play as well, as this will help you avoid fast food restaurants, which are generally less healthy.

So are drivers doing P&D and regional hauls well-equipped for the type of work they’re performing?

Mike Vachon has been driving truck for 25 years – the last four for Purolator Courier – in a tractor-trailer.

In previous jobs, he said he’s frequently been left on his own with regard to handling any work

safety concerns, but at Purolator, drivers are regularly kept up to speed on safe driving, lifting and handling.

“The most important thing is when you’re climbing in and out of the truck, you should have three-point contact with the truck, no clipboard in hand. We have monthly communications about safety awareness, with training sessions on lifting, avoiding back strain, and being aware that for weights over 70 lbs., you should have two people lifting,” said Vachon.

Before the winter season sets in, he said, the company will also schedule meetings about driving in icy conditions, not walking on ice on a truck or trailer surface, and about defensive driving in general.

When drivers head to customers’ facilities, noted Vachon, many issues can arise, because some customers will pay careful attention to their front entrance, but when it comes to the shipping and receiving area, Vachon has frequently dealt with loading docks not being cleaned of snow and ice.

“Sometimes we end up having to call a tow truck,” he said, noting that at Purolator he is told to drive safely and to take his time if needed in dangerous conditions.

Attitude also makes a big difference in safe driving. Stress avoidance is a large part of it, he said.

“The biggest thing for drivers is your attitude when you come to work. In the city, we’re getting cut off constantly, so we have to expect that and not get upset.

If you’re hammering down





and tailgating, that's not the right attitude," said Vachon.

At UPS Canada, there is a safe work methods program which encompasses a set of training dealing with different aspects of work, from lifting, lowering, and preventing falls, to planning for the unexpected.

"We also have methods training for loading and unloading packages inside of the (vehicles) and training for getting in and out of the (vehicle) with packages," said Stuart Morrish, health and safety manager for the company.

"Employees should try to keep the package in what we refer to as the 'power zone' – between mid-thigh and mid-chest where you have good firm grip. When you are stepping in and out of the car, if the package is bulky or heavy, place it on the floor, step out and around, and then lift it off the floor," said Morrish.

"Scan before you step" is another tip, in case drivers emerging from the vehicle accidentally step on a plastic bottle or into a pothole.

"Most of the employees see the benefits of using the right methods. We tell the drivers that their most important delivery of the day is when they take themselves home and enjoy time with their families," said Morrish.

While many P&D drivers will always face some issue with drafts going in and out of the vehicle, Morrish said that UPS' approach is to talk to drivers about dressing in layers for the work they are going to perform.

"As they cool down, they have the ability to put the layers back on," he said.

A new employee performing P&D will go through this typical training process: a two-week orientation, covering

safe work and safe driving methods for performing the job. This is in-class and on-the-road, said Morrish.

They are then assigned to a centre and a driver trainer who teaches them the run they're going to do, the stops they'll perform, and the work methods they will use.

Within the next 30 days, they'd get three more rides and on an annual basis, one of the management team will ride with every driver to cover safe work driving methods, noted Morrish.

On a regular basis, and in the event of an injury, health and safety committees at UPS will do a root cause of injury report and do pre-work communication meetings highlighting these causes to reinforce the correct methods for prevention to the drivers.

Earlier this year, said Morrish, at UPS Canada's Toronto facility, the company even brought in an electronic step scale, and placed it outside the package cart near the driver's door.

The aim was to test the force applied to the body if drivers stepped out using the handrail, stepped out not using it, or if they jumped out right onto the scale.

"We find that has benefited us in that it helps the driver see how the forces increase when you don't use a hand rail when you're stepping out," said Morrish.

For drivers working P&D and regional hauls, there are many product offerings on the market that can also contribute to a safer driving climate.

CanadianVan.com, recently introduced a HTS Ultra-Rack hand truck rack that is mounted on the front of the truck and that takes about six to eight seconds to unload and reload on any model of delivery vehicle. "Our intent

Proper lifting methods and stretching exercises will help minimize on-the-job injuries, according to chiropractor Christopher Singh.

was to address every problem associated with hand truck transport and to develop a solution to meet the demands of the delivery industry. We discovered by improving ergonomics and security, it was possible," said CanadianVan.com's Jean Claude Awwad, who noted that this product, only available in the US for the last five years, is now available in Canada.

The CommandLIFT remote door system, meanwhile, available through Burlington-based Whiting Door Manufacturing, is controlled by a small handheld remote that doubles as a key-chain. Drivers simply press a button to open or close the door and a slide cover prevents the accidental opening while in transit. Suitable applications include couriers, food and beverage delivery companies, and furniture retailers and rental companies.

While city drivers may have little control over weather and road conditions, or even the tools at their disposal, keeping a clear head and staying as flexible as possible are good common sense approaches to this application.

"By improving flexibility especially in the lower back and legs drivers will be able to minimize the chances of injury to both joints and the muscles. The best way to do this is to perform a stretching routine on a daily basis," said Singh.

Minimizing any type of impact at all is sensible injury prevention, said Marrello. But if injuries do occur, and if you have access to therapeutic treatment such as massage or chiropractic treatment, use it.

CS2

Features editor Julia Kuzeljevich has been writing about transportation and supply chain issues for almost a decade. Her meticulously researched articles have garnered transportation writing awards and several Canadian Business Press Award nominations.



Tread and the City

Spec'ing tires for urban applications

BY ERIC BERARD

Olympic sprinters don't use the same shoes that you would wear for an evening walk downtown. The same logic applies to truck tires, as the urban environment is much different than the one in long-haul applications.

Tight turns, debris in back alleys, stones and sharp objects on construction sites: those are only a few of the challenges that "city tires" have to face every day. "Tires on vehicles that make city deliveries tend to scrub the tread away pretty quickly, resulting in a much faster rate of wear. Fast wear means very little chance of irregular wear, so, the objective is a tread compound that wears as long as possible, despite the constant scrubbing," says Timothy Miller, marketing communications manager for Goodyear Tire and Rubber Company.

Also commenting about the uniqueness of urban tires, Michelin's segment manager for heavy trucks John Overing says: "It will be exposed to high scrub, so the tread is deeper and more block-like, to provide as much rubber as possible. The shoulder is closed and buttressed, which helps to reduce wear in applications where there is frequent turning. At the base of the tread grooves, there are stone ejectors which help to reduce stone retention. Finally, the rubber compound is very hard, which helps to provide long tread life."

"They are also designed to provide good wet traction and resist oil contamination frequently encountered in urban use. Their sidewalls are designed to minimize damage from curbing and have special protector ribs to absorb shock and protect the sidewalls from damage," adds Brian Rennie from Bridgestone Firestone Canada.

Yet the urban environment is much-diversified and the tires that suit a refuse truck would not necessarily be a good choice for a P&D application. "When selecting a tire for an application, you need to consider how much traction you need – this affects whether you choose a rib or a lug design. If you drive on pavement all day, a rib design works fine and will give you better wear. If you drive off-road frequently, you may need a lug design that will provide more traction. If the driving application is all pick-up and delivery, you will want to look for a solid shoulder design that helps combat

tire scrubbing in tight turns, and frequent stop-and-start driving," says Chris Hoffman, manager of TBR and retread product marketing for Bridgestone Bandag Tire Solutions.

SPEC'ING TIPS

As for any other purchase, a fleet manager needs to narrow down the type of application his trucks are exposed to before making a decision. In the case of city tires, spec'ing criteria should include cost per mile, original tread life, traction, durability/load carrying capability/safety, casing recovery/retreadability and service, comments Greg Cressman, from Yokohama. Hoffman adds: "You need to understand what your load weighs, how fast the truck will be moving, and how much traction is needed. You may also want to consider fuel efficiency or low rolling-resistance tires. Be sure to select the right load rating as you never want to overload your trucks. On the other hand, you should only pay for what you need, so don't waste your money on higher load ratings than you need. You will also want to select a tire with the right speed rating for your driving situation. If you travel Interstate-type roads, select a tire with a 65-mph speed rating. Other tires designed for off-road are sometimes rated for 55-mph – so you need to understand how fast your routes will be."

Climate is also part of the equation, reminds Timothy Miller: "Fleets located in the southern US may be able to operate with rib tires on all wheel positions, but northern fleets probably need the traction capability of deep lug drive tires in snow and slush." Steering response, resistance to stone retention, fuel economy, resistance to cutting/chipping, resistance to penetration, level of noise and resistance to rib tears and curbing should also be taken into account before buying, says Bridgestone's Rennie. At Michelin, Overing reminds that "cheap at purchase" is not necessarily a good deal at the end of the day: "In order to be successful, the fleet manager should choose tires that will provide the maximum number of retreads. A lower priced tire might seem attractive, but if it cannot be retreaded at the end of its first life, then the overall cost to the fleet will increase. This is particularly true in severe urban applications, where

superior casing quality will ensure the maximum number of retreads."

MIXED EMOTIONS

These are certainly very worthy tips, but what about trucks that do long-haul but also some city delivery, and need to get a good balance between wear resistance and fuel economy? Here's some advice from Yokohama's Cressman: "Study the application and determine where the issues are. Study the fleet's damaged tires for clues. Sometimes the more line-haul/highway tire is okay and you get the benefit of low rolling-resistance, extended tread life, etc. But it may be too tough – lots of road hazards, impacts, rib tears – and require a true regional/urban tire." And, reminds Bridgestone's Rennie: "Depending on specific needs, a deep tread drive tire with solid shoulders and fuel efficient compounds can deliver a good bal-

ance of long mileage and fuel economy under these conditions." At Michelin, Overing is of a similar opinion: "In a situation where the vehicle might cover several different applications, a fleet manager might want to consider a tire designed for regional use. In this case, the tread has features from both the line-haul tire, such as the sipes along the rib edges, and the urban tire, which uses the buttressed shoulder to help reduce wear from frequent turning, and groove bottom stone ejectors to help reduce stone retention."

Speaking of mixing things, we asked retread expert Hoffman to what extent it would be a good or bad idea to use a former line-haul tire casing to make a retread destined to be used in a city environment. Are the constructions of both tires too different for the casings to be used in one or the other environment? Here's his answer: "The constructions are not too different and fleets routinely

do this. However, you have to decide what is most important for your situation. If you are really concerned about fuel efficiency or scrubbing – get a tire casing that is designed for the application. That's a decision that you should be making with a new tire purchase and incorporate your objective into your overall tire management program."

As with any type of tire, proper inflation is key to return on investment. Having an effective tire inflation management program will cost you much less than the costs associated to blow-outs, irregular wear or early wear resulting from under-inflated tires. **CS2**

Eric Berard has 20 years of journalism experience, 10 of which have been spent specializing in the transportation and trucking industries. Berard has been the recipient of several editorial awards while covering the trucking industry.



Good city picks

While their respective catalogues contain hundreds of models (see Web sites for details), here are a couple of model suggestions coming from our city tires experts:

BANDAG

BDV - Rib-type all-position tread design created specifically for inter-city pick-up and delivery driving. Design used when traction is not as much of an issue (truck moving primarily on pavement). This design has a solid shoulder and its tread rubber compound will withstand the rigors of scrubbing.

BRM2 - Designed with wide uninterrupted shoulder and a tread rubber compound that fights high scrub environments. This design is used by the refuse haulers.

BRIDGESTONE (drive tires, P&D)

M725 - 30/32 OTD, open shoulder lug design, dome block-shaped lugs, preferred for high torque and single axle applications.

M726EL - 32/32 OTD, solid shoulder ribs, low rolling-resistance casing.

M711 - 26/32 OTD, open shoulder lug design, high torque applications.

GOODYEAR

G661 HAS - For high scrub applications. Has a sister tire called the G662 RSA with Fuel Max for regional service, all positions. Although the tread designs are similar (the G662 has a decoupling groove), the tread compounds are vastly different. The G661 HSA has a compound that resists the scrubbing of city deliveries and the G662 RSA with Fuel Max makes those one-day trips and helps deliver good fuel economy.

MICHELIN

XZU S - All-position radial with high carrying capacity. Designed for exceptional tread life in high scrub urban applications such as waste vehicles.

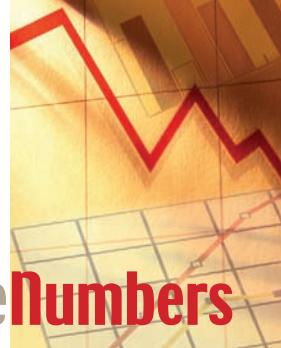
XDN2 - All-weather drive tire, optimized for exceptional traction with no compromise on tread wear.

XZE2 - Regional, all-position radial with extra-wide, extra-deep tread designed to help deliver best wear in high scrub applications.

YOKOHAMA

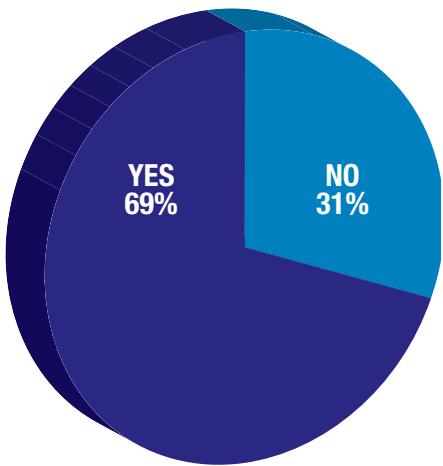
Regional - 103ZR Zen rib/steer tire, TY517/SY767 drive tires, RY023 for some trailer applications – all have deeper tread depths for increased tire life and scrub resistance, new compounds balance wear rate/scrub rate and rolling-resistance and four-season traction (especially SY767 drive for severe four-season use). Tough tread designs resist tearing/scrubbing and punctures.

New Zen line in all cases (highway, regional and on/off road Zen tires) sports casing controlled manufacture in which the casing growth through use is minimized and controlled, so the correct shape is held and stresses and strains are minimized – improving casing recovery and durability. New compounding technology (low temperature/high torque compound mixing) balances low rolling-resistance and fuel economy with good traction and toughness. Yokohama covers them for unlimited number of retreads and guarantees 15% improved cost per km.

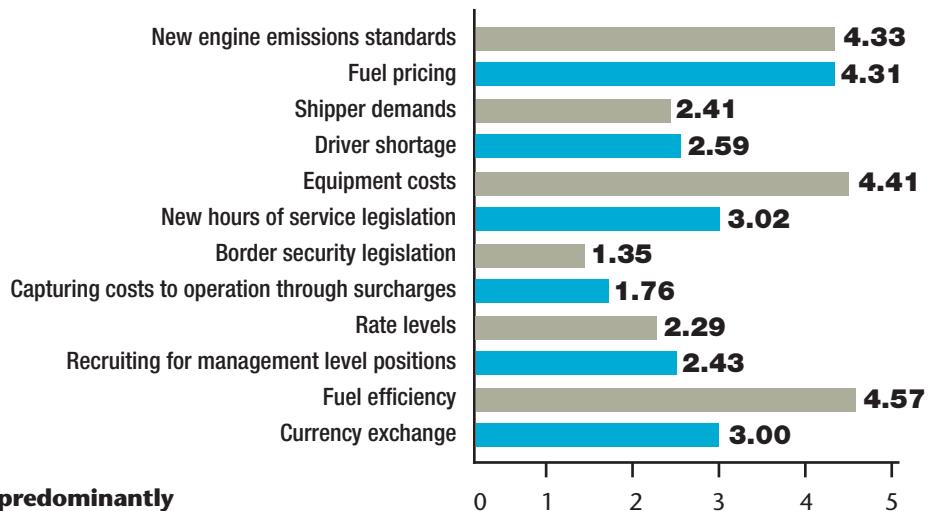


Inside the Numbers

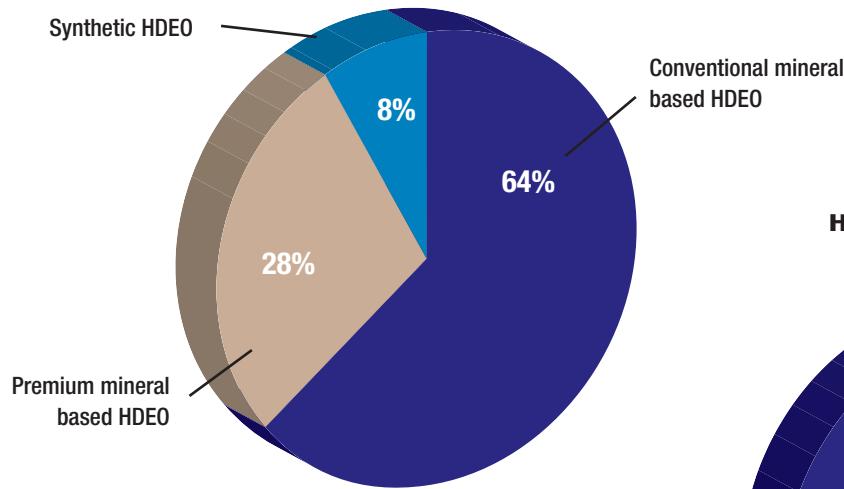
Private fleet support for mandatory speed limiter legislation



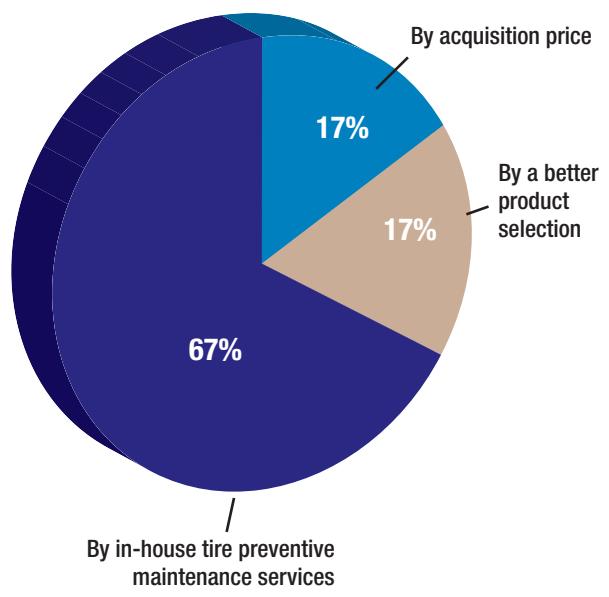
Industry issues most important to private fleets (Scale of 1 to 5)



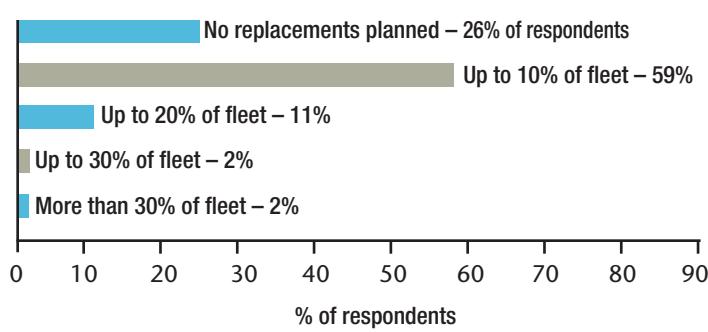
Types of oils predominantly used by private fleets



How private fleets will optimize tire costs in the future



Private fleet medium-duty truck replacement plans for 2010



Delo®

YOU'LL BE SURPRISED BY SOME OF THE PARTS
THAT BENEFIT FROM DELO.®



Is it really a surprise when it's Delo?

Delo® products can help maximize your mileage, extend service intervals, and can help increase the life of your equipment. Some of the largest, most advanced fleets have saved millions of dollars using Delo. Even if you have a fleet of one, using Delo products formulated with ISOSYN® Technology can save you money. Taking advantage of the full line of Delo products could maximize your fuel economy

**ISOSYN® Technology delivers
synthetic-like performance
and outstanding value.**



even more. To learn more about *The Delo Performance Advantage*, visit us at www.deloperformance.com.



DELO DELIVERS CONFIDENCE™



A Chevron company product © 2009 Chevron Products Company, San Ramon, CA. All rights reserved. All trademarks are the property of Chevron Intellectual Property LLC.



SMART TALK FOR URBAN FLEETS WITH FLEETSMART'S SMARTDRIVER IN THE CITY

For long-haul highway trucks, forestry trucks, transit buses, motor coaches or school buses, SmartDriver workshops have been available to deliver sound advice to drivers about saving fuel, while reducing their environmental footprint. As FleetSmart expands the scope of its activities, urban fleet drivers of both light-duty (eg. cars, pick-up trucks, small vans) and medium-duty (eg. cube vans, day cabs) vehicles have been identified as another group that can benefit from SmartDriver training. The result is SmartDriver in the City, which has adapted the existing workshop formats to meet the particular needs of this audience.

With the dedicated assistance of a diverse volunteer committee from the urban transportation community, SmartDriver in the City shares the key points of information from other SmartDriver workshops with additions that are solely applicable to the urban fleet vehicle mix. The significant change is the adaptability of the workshop to meet the specific needs of the drivers, as the information has been packaged into 10-minute segments (tail-gate talks) on a given topic. These "SmartTalks" allow the workshop to be delivered over many shorter segments within regular driver meetings, incorporated into existing training programs or assembled together for longer stand-alone sessions. In fact, certain SmartTalks are specifically designated for light-duty drivers and others for medium-duty drivers.

As with all of the SmartDriver workshops, the intent of SmartDriver in the City is to help companies lower their fuel bills, reduce wear and tear on vehicle components, augment the skills of the drivers which can lower the accident risk, and finally, improve their company image by helping to ensure a cleaner, healthier environment. In order to do this the various SmartTalk modules cover a wide range of topics including:

- detrimental effects of smog, particulate matter and excessive greenhouse gases
- maintaining mental and physical health
- impacts of driver behaviour (ie. speeding, idling, starts and stops, traffic cushions)
- progressive shifting
- components of fuel economy
- gasoline vs. diesel vs. alternative fuels
- preventative maintenance

All SmartDriver in the City training material is easy to reproduce using the CD-ROM included in the instructor's manual. In addition, posters are also made available which can be used to reinforce ideas delivered in each SmartTalk. Finally, certificates of participation are available for individual modules, with full-page certificates and wallet cards for those complete all SmartTalks relevant to their fleet.

Although fleet managers can spec their equipment for fuel efficiency, without proper driver training, their time, effort and money are not optimized. SmartDriver in the City provides this necessary training, so that we can all win by saving money and helping the environment.

For more information on energy-saving opportunities for urban fleets, contact:

ecoENERGY for Fleets (FleetSmart)
Office of Energy Efficiency
Natural Resources Canada
885 Meadowlands Drive, 3rd Floor
Ottawa, ON K1A 0E4
Fax: (613) 960-7340
E-mail: fleetsmart@nrcan.gc.ca

Natural Resources Canada's Office of Energy Efficiency
Leading Canadians to Energy Efficiency at Home, at Work and on the Road

Be
FleetSmart!

Canada