

Maintenance

Best Practices for Maintenance Management

HOW TO GET THE MOST LIFE OUT OF HYDRAULIC SYSTEMS
Page 12

IS IT BETTER TO LEASE OR BUY VEHICLES?
Page 16

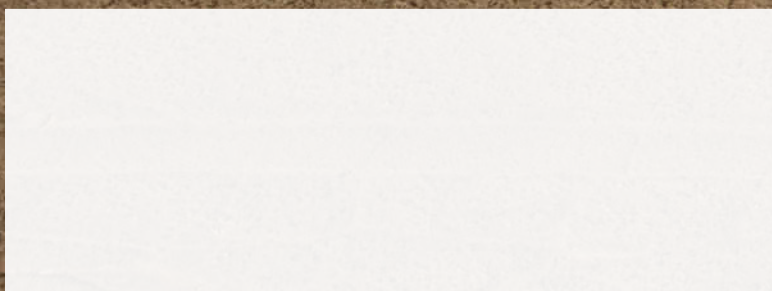
FIVE FACTORS TO CONSIDER BEFORE FIXING DAMAGED AUTO GLASS
Page 18

WHAT TO DO WITH AGING VEHICLES

REPAIR THEM OR JUNK THEM?

How one fleet operation handled this quandary
Page 8

The County of Fresno's Fleet Services Division involved all stakeholders and did considerable research before deciding to replace its aging fleet of mobile fueling and service trucks to ensure the best use of productive assets.



VEHICLESERVICEPROS.com
OFFICIAL WEBSITE OF FLEET MAINTENANCE

GREAT PRIZE GIVEAWAY

Win wrenches, lifts, even an iPad! Total value: \$40,000

UP-TO-DATE Online Product Guide

An extensive resource of products, services, parts
www.vehicleservicepros.com/directory

EXCLUSIVE Ask the Expert

Industry experts answer your questions
www.vehicleservicepros.com/ask-the-expert





IT'S NOT A CALCULATOR, BUT IT CAN REALLY ADD UP.

NAVISTAR

**The remarkable Navistar® PocketMaxx™
Use it and watch savings go up, problems go down.**

PocketMaxx is the easy to use, accurate, diagnostic tool that quickly gathers operating data from MaxxForce® engines, International® trucks, and IC® Bus to keep your fleet on the road and your business moving.

Small in size but large in capability, PocketMaxx's advanced technology monitors engine, brake, and transmission functions. It also clearly displays vital facts, figures, fault codes, and more.

Navistar PocketMaxx from NEXIQ Technologies™. Data at your fingertips.

www.nexiq.com

www.vehicleservicepros.com/FMInquiry and enter 20

Maximize Performance.



Prevent fuel gelling, ice crystal formation, and reduce cold filter plug point as much as 30°F.



Penray Winter Pow-R® Plus is available for both ULSD and BioDiesel fuels. Specially formulated with HAFI® technology, Winter Pow-R® Plus helps enhance cetane, improve fuel economy and improve cold weather starting.

ONE BOTTLE, ONE TRUCK - Winter Pow-R® Plus is super concentrated to give you the most for your money! Choose a fuel product that gives you the best results and the best treat rates. In addition, in every bottle you receive a dedicated sales team, experienced technical support, innovative technology, Penray's quality manufacturing and most importantly you can use a product that works!



THE DRIVING FORCE BEHIND WINTER MAINTENANCE.



www.penray.com





COVER STORY

8 COVER STORY

Repair Them Or Junk Them?

How one fleet operation handled this quandary

FEATURES

12 HEAVY DUTY

How To Get The Most Life Out Of Hydraulic Systems

It all begins with the spec'ing process.

16 MEDIUM DUTY

Is It Better To Lease Or Buy Vehicles?

The answer boils down to each company's individual needs.

18 LIGHT DUTY

Five Factors To Consider Before Fixing Damaged Auto Glass

Paying attention to your fleet's windshields can reduce vehicle downtime and expense.

21 TOOLS & EQUIPMENT

A roundup of the latest tool and equipment offerings.

22 TRAINING

How to get the most out of training software.

24 INDEPENDENT SHOPS

The 2013 Heavy Duty Aftermarket Week.

25 FLEET ESSENTIALS

What's new in products for more efficient fleet operation.

26 MANAGEMENT

The importance of analyzing failures and successes.

28 MARKET WATCH

Major heavy duty truck OEMs are changing their global platform strategies.

29 CLASSIFIEDS & AD INDEX

Product and service offerings.

30 GUEST EDITORIAL

How do you feel about training and developing your workers?

DEPARTMENTS

6 UPTIME

The winners of the inaugural *Fleet Maintenance*/Kansas University Scholarship Program.

20 TIRE TACTICS

Want to get the most from your tires?

VEHICLE SERVICE PROS

The online Media Center covers a range of topics through videos, webcasts and whitepapers.

www.vehicleservicepros.com/media-center

PRODUCT GUIDE

A resource directory of products, services, tools, shop equipment and much more.

INDUSTRY NEWS

The latest news, developments and trends impacting the industry.

RESOURCE LIBRARY

An information center of reports, white papers, reference material and more.

FLEET MAINTENANCE MAGAZINE

Larry M. Greenberger Group Publisher
lmg@fleetmag.com
David A. Kolman Editor
david@fleetmag.com
Erica Schulz Managing Editor
erica@fleetmag.com
Craig Truglia Assistant Editor
craig@fleetmag.com

EDITORIAL ADVISORY BOARD

Don Querciagrossa Groendyke Transport
Bob Raybuck National Truck Equipment Assoc.
Dennis Soch Keebler Company
Bill Vanden Brook City of Madison, WI

PRODUCTION

Erin Brown Graphic Designer
Connie Heffron Media Production Representative
Connie.Heffron@cygnus.com
Steve Swick Production Director

ADVERTISING REPRESENTATIVE

Joel Franke Associate Publisher
920-563-1775

TOOL AND EQUIPMENT ACCOUNT MANAGERS

Sarah Shelstrom Multi-Media Account Executive - East
920-568-8364
Cortni Jones Multi-Media Account Executive - Central
920-568-8391
Kylie Hirko Multi-Media Account Executive - West
920-563-1666

CLASSIFIED ADVERTISING

Mike Braun 920-568-1396

EUROPEAN SALES REPRESENTATIVE, ITSL MEDIA

Julian Maddocks-Born Sales Director
julian@itsluk.com, +44 (0)1442 230033
Benedict Hume Sales Manager
benedict@itsluk.com, +44 (0)1442 288287

REPRINTS

For reprints and licensing please contact Nick Iademarco at Wright's Media
877-652-5295 ext. 102 or niademarco@wrightsmedia.com.

LIST RENTAL

Elizabeth Jackson Account Executive, Merit Direct LLC
ejackson@meritdirect.com
847-492-1350 ext. 18

ADMINISTRATION

Valerie Schmitt Administrative Assistant

CIRCULATION

Terri Pettit Audience Development Manager



CYGNUS BUSINESS MEDIA

John French CEO
Paul Bonaiuto CFO
Gloria Cosby EVP Agriculture, Technology and Transportation
Larry Greenberger Group Publisher/Transportation
Gerry Whitty VP Marketing
Julie Nachtigal VP Audience Development
Eric Kammerzell VP Technology
Curt Pordes VP Production Operations
Ed Wood VP Human Resources

Fleet Maintenance (USPS 020-239; ISSN 2150-4911 print; ISSN 2150-492x online) is published 10 times a year (Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct & Dec) by Cygnus Business Media, 1233 Janesville Avenue, PO Box 803, Fort Atkinson, WI 53538-0803. Periodicals postage paid at Fort Atkinson, WI, and additional mailing offices. Subscriptions are free to qualified businesses and job titles.

Paid subscriptions are available:	United States	Canada & Mexico	International subscriptions, via airmail
One Year	\$40	\$55	\$85
Two Year	\$75	\$110	\$165

For change of address, subscription information or questions: Toll Free - 877-382-9187, Local - 847-559-7598, Email - circ.fleetmag@omeda.com. Canada Post PM40063731. Return Undeliverable Canadian Addresses to: Fleet Maintenance, Station A, PO Box 54, Windsor, ON N9A 6J5 POSTMASTER: Send changes of address to Fleet Maintenance, Cygnus Business Media, PO Box 3257, Northbrook, IL 60065-3257

For jobs like this...



The Right Paint is Essential.

INTRODUCING DELFLEET® ESSENTIAL BASECOAT



PPG Commercial Coatings
Bringing innovation to the surface.™





By David A. Kolman, Editor

The winners of the inaugural *Fleet Maintenance/Kansas University Scholarship Program*

Six scholarship recipients chosen from more than 40 entries

The winners of the newly created *Fleet Maintenance/Kansas University (KU) Scholarship Program* for the university's *Maintenance Management Online Certificate Course* have been selected. The annual program, sponsored by Michelin and WorkSafe USA, advances the cause of maintenance management.

Applications for the scholarships came from across the nation, from people with various levels of experience. For those of us involved in the scholarship decisions, it was a most challenging task.

One thing all of those chosen for a scholarship had in common was a commitment to continual learning - a necessity for steady success in today's challenging business environment, a passion for our industry and the desire to help others advance their business skills, knowledge and careers.

The Recipients

Chosen from more than 40 entries, the scholarship winners are:

Thomas Huff, Facility Manager, Precision Motor Transport Group (PMTG), Okemos, MI. With a fleet of approximately 300 trucks, the company provides premium automotive transport services throughout the Eastern Seaboard and interior of the U.S. Huff, who has worked for PMTG for the past nine years, was recently promoted to facility manager of the company's Williamston, MI, facility.

James Husted, Director of Maintenance, Garner Transportation Group, Findlay, OH. A family-owned and operated fleet of some 100 trucks, the company focuses on transporting general commodities regionally, east of the Mississippi River. Husted has been involved with

vehicle maintenance for more than 30 years.

Gerald Mead, Vice President of Maintenance, PAM Transport, Tontitown, AR. The company provides nationwide dry van truckload, expedited truckload, intermodal and logistics services to the manufacturing, retail and automotive industries. Mead's involvement with vehicle maintenance spans 23 years.

Joe Murzynsky, Fleet Maintenance Manager, South Walton Fire District (SWFD), Rosa Beach, FL. The SWFD is responsible for fire protection, emergency medical services, public fire education and prevention duties for an 84-square-mile area within Walton County,

EACH SCHOLARSHIP recipient shares a commitment to continual learning, a passion for the fleet maintenance industry and the desire to help others advance their skills, knowledge and careers.

VMAC
VEHICLE MOUNTED AIR COMPRESSORS
COMPACT. POWERFUL.

PREDATAIR RAPTAIR60

UNDERHOOD

REDUCED EMISSIONS!
LOWER FUEL COSTS!
IMPROVED PERFORMANCE!

THE GREENEST AIR COMPRESSOR SOLUTIONS IN THE INDUSTRY!

CALL FOR A LIVE DEMO:
1-866-273-8372
vmacair.com/fleets

MAKING HIGH FUEL COSTS EXTINCT

VMACAir
Visit our YouTube Channel! user/vmacair

www.vehicleservicepros.com/FMInquiry and enter 23



Get Connected - Get Solutions

NAFA - Fleet Solutions for Fleet Professionals

NAFA provides members with networking, publications, regional chapter meetings, government representation, seminars, online information, and the annual Institute & Expo, the largest fleet event in the country!

- Run a more cost-effective fleet by networking with 3,000+ NAFA colleagues.
- Tap into a dynamic career network that includes job postings and a resume bank.
- Let your voice be heard! NAFA addresses legislative issues concerning the entire fleet management community.
- Make valuable contacts through networking online or at meetings and events.

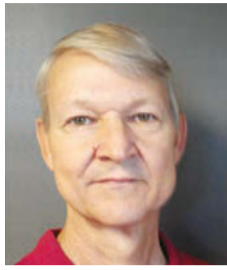
Join NAFA Today!
www.nafa.org/join



www.vehicleservicepros.com/FMInquiry and enter 24



Thomas Huff,
Precision Motor
Transport Group,
Okemos, MI



James Husted,
Garner
Transportation
Group, Findlay, OH



Gerald Mead,
PAM Transport,
Tontitown, AR



Joe Murzynsky,
South Walton
Fire District,
Rosa Beach, FL



Don Sunseri, City
of San Jose,
San Jose, CA



Linda Vinson,
Caledonia Haulers,
Caledonia, MN

Florida. Murzynsky, who has been with the SWFD since 2006, oversees a fleet of 15 emergency vehicles and eight staff vehicles.

Don Sunseri, Equipment Maintenance Supervisor, City of San Jose, San Jose, CA. San Jose, with an incorporated area of 179.8 square miles, is the largest city in the Bay Area, located roughly 50 miles south of San Francisco, and the third largest city in California, following Los Angeles and San Diego. Sunseri has been in the government/municipal fleet trade for 23 years.

Linda Vinson, Fleet Maintenance Manager, Caledonia Haulers, Caledonia, MN. The company transports bulk-liquid food products throughout the U.S. and Canada with a fleet of more than 190 units. Vinson became involved with the maintenance industry in 2000. She started reading job cards and doing data entry into a simple computer system and has worked her way up through the maintenance department to her current position by self-educating herself along the way.

The Online Course

The *Maintenance Management Online Certificate Course* is designed for all types of mobile fleets and maintenance environments. Upon successful completion of the course, the scholarship recipients will be awarded a certificate by Kansas University and *Fleet Maintenance* documenting their specialized education and knowledge in maintenance management.

The instructor for the course is Joel Levitt, a leading trainer of maintenance professionals and the author of a column on management matters that appears regularly in *Fleet Maintenance*.

Complete details about the course can be found on the KU Continuing Education's website at www.continuinged.ku.edu/programs/maintenance_management/index.php.

Worthwhile Cause

Sponsoring the *Fleet Maintenance/Kansas University (KU) Scholarship Program* are Michelin (www.michelinman.com) and WorkSafe USA (www.dump-lok.com).

Supporting the program is an opportunity for you to give back to the fleet maintenance industry, plus make a real difference in helping to further evolve professionalism within our industry.

For information on becoming a sponsor, contact Joel Franke, *Fleet Maintenance's* associate publisher, by phone at 920-563-1775, or by e-mail at Joel@fleetmag.com.



WE MAKE FLEET DIAGNOSTICS EASY

TEQ FORCE
The experts in diagnostics.

- SYSTEM ADVICE AND SETUP**
- OEM SOFTWARE ASSISTANCE**
- ONE-CALL TECHNICAL SUPPORT**

VISIT WWW.NEXIQ.COM OR CALL: **800.639.6774**

VOTE FOR UP TO FIVE PRIZES A DAY, EVERYDAY UNTIL OCTOBER 31ST!

Register for tools, equipment, iPads and more* ...

VEHICLESERVICEPROS

Sponsored by:

Brought to you by:

Follow us on

*Prizes listed are for example only. Actual prizes will be available in the month of September.

Every Toolbox Needs...

WALTON Tap Extractors & Tap Extensions

- Professionals in a wide variety of industries have depended on high-quality Walton tools since 1908.
- **Tap Extractors** will remove broken taps simply and safely, without drilling, lasers, damaged threads, scrapped parts or repair inserts. Available in every tap size, both inch and metric.
- **Tap Extensions** will extend the reach of regular-length taps and allow tapping in deep holes and awkward locations. Square and round sockets conform to leading tap sizes, and these tools are suitable for both machine- and hand-tapping.

Available as sets or individual pieces

Tapping into good ideas for over 100 years

MADE IN THE U.S.A. SINCE 1908

600 New Park Avenue
West Hartford, CT 06110
Tel: (860) 523-5231
sales@waltontools.com

WALTON COMPANY SINCE 1908

www.waltontools.com

www.vehicleservicepros.com/FMInquiry and enter 25

www.vehicleservicepros.com/FMInquiry and enter 26

Repair Them Or Junk Them?

By David A. Kolman, Editor

How one fleet operation handled this quandary

Often, fiscal constraints compel fleets to keep some vehicles and equipment in service for much longer than originally intended. As a consequence, maintenance costs increase, availability for vehicle and equipment use decreases and more frequent inspections and services are required. The dilemma becomes: When to replace aging vehicles and equipment rather than continue to repair them?

Typically, the overriding factor is money. But for the County of Fresno's Fleet Services Division, facing the repair versus replace quandary on its aging fleet of mobile fueling and service trucks, the determining factor was – of all things – government regulations.

Fresno, nicknamed the Raisin Capitol, is located in the heart of California's San Joaquin Valley, an area known for its large agricultural production. The fifth largest city in California, it is located south of Stockton and north of Bakersfield.

Fresno County covers some 6,000 square miles. Fleet Services manages the County's vehicle

and construction equipment fleet. Under the direction of Allen Moore, Fleet Services Manager, and Dennis Kerns and Greg Buckley, Fleet Services Supervisors, the division is responsible for the fleet's maintenance and procurement. This includes fleet planning, acquisition, maintenance and sale of surplus equipment.

All maintenance is performed in one fully equipped shop that operates weekdays with one shift and 31 employees - 16 technicians, three welders, three parts people and the nine support people. The division also operates 19 fueling sites located throughout Fresno County, plus provides transportation services through a centralized motor pool.

Fleet Services' fleet is composed of 850 cars and light trucks, 150 pieces of construction equipment and 145 heavy duty trucks and trailers, including the four mobile fueling and service trucks, says Moore.

The four mobile service vehicles are operated by employees from the County's Public Works (PW) Department and each vehicle is domiciled at a specific PW yard, Kerns says. The old trucks were diesel-powered 1980 Ford flatbeds that had been jerry-rigged to serve as field service trucks. The trucks were used to change oil and fluids and do minor repairs and services to the County's PW equipment in the field.

Despite the age of the trucks, the one element that pushed the decision to replace the trucks was environmental regulations.

In February 2006, the California Air Resources Board adopted the *Diesel Particulate Matter Control Measure* for on-road heavy duty diesel vehicles operated by public agencies, Moore explains. This regulation mandates that municipal vehicle owners reduce diesel particulate matter emissions from their affected vehicles.





The trucks have been outfitted with a real-time automated fuel management system to help improve accountability for pumped assets, reduce waste and abuse and provide fuel consumption data.

As a result, Fleet Services implemented a diesel emission control plan to meet the requirements for "early implementation status," he says. By doing more up front, this pushed out the compliance date to July 1, 2012.

ACCOUNTABILITY

This just didn't make good business sense, says Moore. The decision was made to go with new equipment, designed specifically to the application and outfitted with the newest technology.

The objective was threefold: to spec the trucks to achieve operating and maintenance savings, to have the vehicles well-organized for quick and easy access to maximize jobsite productivity and to gain better control and accountability for the metered or pulsed consumables, such as gasoline and diesel, being dispensed into the construction equipment.

This type of accountability has been in place at all of the County's fueling facilities for the past 15 years, he notes. Each location is equipped with an E.J. Ward automated fuel management system (www.ejward.com) to help assure the security and accountability of fuel.

Fleet Services uses the FleetFocus fleet management software from AssetWorks (www.assetworks.com), a provider of fleet asset and maintenance management solutions. Moore says FleetFocus is used to track all functions related to the maintenance of vehicles and equipment, including processing repair and preventive maintenance work orders, capturing operating expenses and doing billing and tracking for vehicle equipment usage.

It was decided to incorporate AssetWorks' FuelFocus a real-time automated fuel management system – on

Continued page 10

The new mobile fueling and service trucks were designed specifically to achieve operating and maintenance savings and be well-organized to maximize jobsite productivity.

Considerations when equipping a mobile service truck

By Steve Kornet, Western Regional Manager, PESD, Lincoln Lubrication Systems

When outfitting or upgrading a mobile service truck, there are several factors that should be considered:

- Analyze the fleet to determine what fluids are necessary to accommodate different vehicles.
- Know whether the lube truck will be used to "top off" vehicle fluids or if it will be performing complete fluid exchange. This will help to determine the necessary tank capacity. If the lube truck will be servicing vehicles at a remote site and won't be able to be refilled frequently, it would be wise to specify higher-capacity tanks.
- What is the required flow rate for the intended application?
- Climate also should be taken into account. If the lube truck will be used in a colder environment, it would be beneficial to select an enclosed, heated lube body so that fluids remain at an appropriate temperature for ease of transfer and maximum flow rate.
- Decide upon appropriate storage areas for new and used filters, tools and other essential service items. If the truck will be used at night, ensure that there will be sufficient lighting on board.
- Specify an appropriate compressor to provide adequate volume for pumps, air tools and filling tires.

HOSE REELS

Typically, lube trucks use spring-rewind hose reels. Hose reels should be rated for outdoor use.

Standard hose length is 50 feet with 1/2-inch or 3/4-inch diameter hose for most fluids. Fuel and used fluid evacuation reels use 1-inch to 1-1/2-inch diameter hose.

The operating environment needs to be taken into consideration when selecting hose reels. The harsher the environment, the more important becomes durability and reliability.

Lincoln, by way of example, powdercoats its reels to make them resistant to water, dirt and oils.

If the lube truck is spec'd with the customer's applications in mind, it will provide years of service in maintaining its vehicle fleet.

Steve Kornet is western regional manager for Lincoln Lubrication Systems' PESD (Petroleum Equipment Service Distributors) operation. Lincoln provides the industrial and automotive industry with lubrication equipment, fluid control systems, pumping products and technical service. www.lincolnindustrial.com.

LIFTS



TWO-POST LIFTS

System 1

7,000 through 30,000 lb. capacities. Inquiry #10

THAT LAST



MOBILE LIFTS

MP 18

Mohawk MP-series electric-hydraulic mobile lifts available in 2, 4, 6, or 8 post configurations. Inquiry #11

A LIFETIME



FOUR POST RUNWAY LIFTS

TR 50

19,000 through 120,000 lb. capacity models give complete under vehicle access for trucks & buses. Inquiry #12

To Learn More About Discounted Government Pricing, scan here

Call 1-800-833-2006 or Visit www.mohawklifts.com



Scan with RedLaser



www.vehicleservicepros.com/FMInquiry and enter 27

MOHAWK

Mohawk Industrial Park

P.O. Box 110 • Amsterdam, NY 12010

Telephone 518-842-1431 • FAX 518-842-1289

MADE IN U.S.A.

the new mobile service trucks. The system will help improve accountability for assets pumped from the service trucks, lower overall fuel expenditures, reduce “shrinkage” – waste and abuse – through automated fuel dispensing and provide timely fuel consumption data, says Moore.

FuelFocus processes the transfer, receipt and

issue of all fuel. When integrated with AssetWorks' FleetFocus fleet management software, data captured by FuelFocus is added in real-time into a single, centralized database, saving time and improving accuracy.

Fresno County had its FuelFocus hardware and software configured as a Vehicle Data Collector

(VDC) to gather dispensing information, he explains. Using a radio frequency (RF) antenna, the VDC wirelessly transmits directly into Fleet Services' FleetFocus maintenance database.

The data collected by the FuelFocus Mobile Fuel Controllers is transmitted any time one of the four mobile fueling and service trucks passes within the wireless collection points' transmission radius of about 500 feet at the fueling locations where the trucks normally assigned. The information is transmitted instantly, without human intervention or action, Kerns adds.

Prior to the decision to go with the FuelFocus automated fuel management system, Fleet Services worked with Fresno County's IT department to establish the functionality of the system, how well it would work with the current fleet maintenance and management software systems and if it would meet the operational needs of the PW department, says Moore.

REQUIREMENTS

The first step in the replacement process was to decide upon the specifications and requirements for the mobile fueling and service trucks, Kerns says. While the basic parameters to meet the needs of the Public Works Department were known, Fleet Services personnel sought input from all stakeholders, including the drivers of the trucks. The personnel also looked at various makes and models of service trucks.

The objective of all this, he notes, was to gather essential information in order to design an optimum vehicle and body configuration that would serve the needs of the public works department for today and for the next 15 years - the intended lifecycle of the new trucks.

Next, the specs and requirements for the trucks were developed. This was a massive undertaking, according to Kerns, resulting in 10-plus pages of details that were included in the bidding process. Being a government entity, Fresno County uses a formal bidding process that begins with Request for Proposals (RFPs) or Requests for Quotations (RFQs).

Work on the project began in February 2011. The RFQs went out five months later in July. The closing date for the bidding process was August 3, 2011.

Among the specs outlined: setback front axle Model Year 2011 chassis with a gross vehicle weight of approximately 37,000 pounds; front suspension rated at 14,600 pounds; rear leaf spring suspension rated at 23,000 pounds; trailer towing provision; CARB Certified diesel engine rated at 270 hp at 2,000 rpm and 860 ft/lbs of torque at 1,300 rpm with an engine brake; six-speed automatic transmission; and 12 R 22.5 16-ply tires.

Get it clean, wherever.

Introducing the ultra-efficient, ultra-portable Kärcher HDS Classic hot water pressure washers. With 92% efficient burner technology, reducing fuel consumption by 25%, you'll save more money and time. Contact your Kärcher dealer today to see the difference.

KÄRCHER
makes a difference

* Visit www.karchercommercial.com/rebate for terms and conditions or your authorized North American Kärcher Commercial dealer. Offer good in the U.S. only and void where prohibited, taxed or restricted by law. Offer valid for U.S. residents only. Offer valid on participating Kärcher HDS Classic pressure washer purchases made from October 1, 2012, through December 31, 2012.

www.karchercommercial.com • 1-888-805-9852

www.vehicleservicepros.com/FMInquiry and enter 28

Fleet on the Street Diagnostics

Whether you have a fleet of one or thousands, the next vehicle in your service bay is the most important one ...

Dearborn Protocol Adapter 5 (DPA 5) - Dual CAN & Bluetooth®

The DPA 5 is the Fastest, most Reliable, and most Durable Vehicle Datalink Adapter (VDA) on the market!

The DPA 5 wireless kit includes everything you need to perform diagnostics on Heavy, Medium & Light-Duty vehicles and equipment to keep your fleet on the street!

Easy PC Connections: USB and Bluetooth® Wireless.

Protocols: CAN/J1939, J1708/J1587, Diagnostics on CAN, More!

Diagnostic Software: Works with Engine, Transmission & Brake OEM Software and all RP1210 or J2534 Compliant Software.

Out-of-the-Box Functionality: DG Diagnostics Software included.

2 Year Warranty: Best-in-Industry

Laptop not included

DG TECHNOLOGIES
Vehicle Network Solutions
www.dgtech.com

A Quarter Century of Vehicle Network Solutions 248.888.2000 store.dgtech.com **10% off with Discount Code: FleetStreet**

www.vehicleservicepros.com/FMInquiry and enter 29

There were also comprehensive specs and requirements for the interior and exterior of the cab.

Just as thorough were the requirements and specs for the service truck body, starting with the design and layout of the body, tanks and equipment, based on a step-down and drop-side design with mild steel construction of 10 gauge or heavier. Other particulars included LED lighting; equipment for diesel fuel service, chassis grease service, oil service, gasoline service, water service, drain oil service, air service and pressure wash service; hydraulic system; and work lights and storage.

The contract was awarded to Fresno Truck Center, a full-service Freightliner and Western Star commercial truck dealer in Fresno, CA (www.california-truckcenters.com). The contract was for a 2012 Freightliner M2 106 chassis combined with a Dean Industrial Enterprises truck service body. The Fresno-based company, the leading lubrication method specialists in the Western United States, has been custom designing, assembling and servicing lube service trucks for more than 50 years (www.deanindustrial.com).

The Freightliner M2 106 is equipped with a Cummins ISC diesel, rated 300 hp and 860 ft/lbs of torque, mated to an Allison 3500 series automatic transmission.

All trucks were operational by July 31, 2012.

Dean Industrial Enterprises designed the units per Fresno County's requirements to carry diesel fuel, gasoline, chassis grease, two motor oils, hydraulic oil and water, and installed the onboard AssetWorks hardware, says Kerns. Drain oil recovery is provided with provision for draining spent filters.

The fuel pumps, high-pressure wash pumps and the Doosan Ingersoll-Rand air compressors are hydraulically driven. The primary product pumps and reels are Lincoln Industrial (www.lincolnvse.com).

THE BASICS

Overall, the replacement process went according to the timeline established for the project and was successful, say Moore and Kerns.

One of the main reasons for this, they feel, is that by involving all stakeholders and gathering the necessary prerequisite information from them, Fleet Services was able to gain a clear understanding of the application needs and requirements, along with the operating parameters – what the mobile fueling and

service trucks are expected to do and how.

Moreover, regular meetings were held with all suppliers throughout the entire trucking building process so that there were no surprises and any problems that cropped up could be addressed more quickly. **FMX**

100% GUARANTEE

**WE CAN IMPROVE YOUR EFFICIENCY.
GIVE US 15 MINUTES TO SHOW YOU HOW.**

CITGO LUBRICANTS

LET US PROVE IT. Call 800-248-4037.

Visit www.VehicleServicePros.com/einquiry and enter 30

CITGO® believes we can improve the efficiency of any business. And we'll even guarantee it. Because we work harder at providing a customized combination of products, pricing, programs and people to increase your company's productivity and improve the bottom line. By extending drain intervals, prolonging component life, increasing fuel efficiency, along with the most outstanding service support you've ever experienced. Give us 15 minutes for a consultation and let us prove it to you.

Scan this code with your phone to learn more.





How To Get The Most Life Out Of Hydraulic Systems

By David Douglass, Director of Training and Education, Muncie Power Products

It all begins with the spec'ing process

When it comes to hydraulic systems, care taken during the specification process can pay dividends in terms of maintenance and component longevity. That's because when hydraulic system components are properly specified, the system operates at a higher level of efficiency, generates less damaging heat, and lasts longer.

The specification process should always begin with the work to be done. For example, a dump trailer, an ejector trailer and a live floor trailer may be similar in appearance, yet each requires very different hydraulic components. Choosing a pump and reservoir

The duty cycle of the equipment must be considered when specifying reservoir size and reservoir type, and when determining whether or not a heat exchanger may be required.

Photo from iStockphoto

designed for a dump trailer application and fitting them on a live floor or ejector trailer application can have disastrous results.

When discussing hydraulic components with your supplier, always provide the

make and model numbers of the equipment being powered, as well as the manufacturer's recommended operating flow and pressure requirements. Also be sure to tell the supplier if more than one type of trailer may be used with the same tractor, as this will require a specialized system designed around the differing requirements.

Key parameters include flow requirements, operating pounds per square inch (psi) and length of duty cycle.

HYDRAULIC PUMP

Also to be considered is how the hydraulic pump will be driven. Typically, this will be through a power take-off (PTO), but it could also be through a belt-driven pump or via a driveshaft directly from the engine crankshaft.

The hydraulic pump produces the flow to perform the work. The rate of flow determines the speed at which the equipment will operate. Therefore, it is important to follow the equipment manufacturer's recommendation.

An undersized pump may do the work, but slowly. An oversized pump may cause equipment to operate too fast, creating a potentially dangerous situation.

Also, oversizing the pump may result in higher system heat which, in turn, shortens the life of oil and components. In specifying a hydraulic pump, bigger is not better.

OPERATING PRESSURE

Operating pressure determines the force generated within the hydraulic system. This is another area where the equipment manufacturer's specifications must be adhered to.

The pump selected must be able to tolerate the operating pressure up to the relief valve setting. Twisted pump shafts and excessive gear housing cut-out are common symptoms of pump over-pressurization and can be prevented by specifying the right pump to start with and maintaining relief valve settings within the range specified by the manufacturer of the equipment.

If a pump is losing efficiency or the system is operating slowly, adjusting the relief valve will not make it work faster.

DUTY CYCLE

The duty cycle of the equipment must be considered when specifying reservoir size and reservoir type, and when determining whether or not a heat

Continued page 14

Tips on hydraulic oil selection

By David A. Kolman, Editor

Hydraulic oils, the medium for transferring power in hydraulic systems, play a key role in extending the life of hydraulic systems.

These oils are engineered to protect against wear, rust and corrosion; resist oxidation to minimize sludge and varnish; improve pumpability; exhibit water-separating properties; and deliver other application- and temperature-specific qualities, according to Tony Negri, director of marketing for commercial lubricants, Phillips 66 Lubricants, the fourth-largest finished lubricants supplier in the U.S., offering four brands: 76 Lubricants, Conoco, Phillips 66 and Kendall Motor Oil. www.phillips66.com.

Viscosity is the single most important characteristic of any lubricant, notes Negri, and must be correct for the temperatures and pressures that will be experienced in a given application. Low-viscosity oils are typically used



Because hydraulic oils play a key role in the performance of a hydraulic system, improper oil selection can result in slow or erratic operation, sluggish response and increased equipment downtime and expense.

Photo from iStockphoto

for high-speed operations, low-temperature applications and low-pressure loads. High-viscosity oils are optimal for slow-speed

operations, high-temperature applications and high-pressure loads.

The viscosity index (VI) is a measure of the rate of change in viscosity with regard to temperature. The higher the VI, the smaller the relative change in viscosity with temperature.

This is important, he explains, because hydraulic system designers require a specific viscosity to maintain peak system performance. If the viscosity is altered by large temperature variations, as is common in spring and fall in many areas of the country, system performance could be negatively impacted, possibly leading to erratic equipment operation or unplanned downtime.

Premium, high viscosity index (HVI) hydraulic oils can better withstand such changes, he notes.

PRINCIPAL CONSIDERATIONS

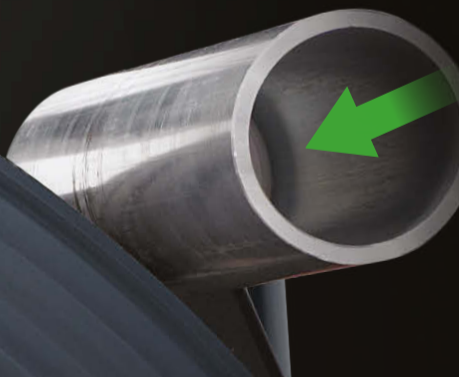
To select most appropriate hydraulic oil, Negri recommends answering some fundamental

Continued page 14

Make balancing *faster & easier*



- ▶ Solve runout vibrations
- ▶ Maximize tire life
- ▶ Prevent tire cupping



HUNTER
Engineering Company
www.hunter.com

follow us on
facebook

www.vehicleservicepros.com/FMInquiry and enter 31

Fleet Sense 101

Today's Lesson: Cab Heating

Whether your drivers are sleeping, loading, unloading or eating, once the cold weather hits, they'll idle to keep the cab warm.



That's \$3.65 saved every hour, every truck.
How many trucks do you have?



**Espar Heaters:
They Just Make Sense.**

(800) 387-4800
www.espar.com

* Based on the average price of diesel on Sept. 09, 2011.

†Based on DOE/Argonne National Laboratory estimates: 1,500 hours overnight idling.

www.vehicleservicepros.com/FMInquiry and enter 32

Tips on hydraulic oil selection

Continued from page 13

questions. Does the hydraulic oil:

- Meet the pump manufacturer's requirements? Pump manufacturers have varied criteria on minimum requirements that the hydraulic oil must meet depending on the type of pump in service.
- Have good low- and high-temperature viscometrics? The lubricant must provide the correct viscosity at a specified operating temperature to prevent metal-to-metal contact and to protect the pump.
- Have thermal stability and resistance to oxidation? The mechanical action of hydraulic components, friction and hydraulic pressure contribute to heat buildup in the hydraulic system, leading to oil degradation and sludge formation.
- Have good foam control? Air contributes to temperature increase and overheating, if not allowed to break out of the hydraulic fluid. Air bubbles may also cause an effect known as micro dieseling that leads to thermal degradation.
- Separate readily from water? Water, the most common contaminant in mobile hydraulic systems, must be separated from the oil and allowed to settle to the bottom of the reservoir before it gets carried over in circulation.
- Need to be biodegradable? When mobile equipment operates on or near lakes, rivers, dams and park areas, the use of environmentally-safe hydraulic oils (readily-biodegradable or inherently-biodegradable) is often mandated by law to minimize risks if hydraulic oil were to contact the soil or water.

exchanger may be required. Longer duty cycles result in higher temperatures. In order to dissipate heat, reservoir capacity may need to be increased.

Some applications with short or intermittent duty cycles will require only enough reservoir capacity to extend the hydraulic cylinder while leaving four to six inches of reserve in the tank. Applications with longer duty cycles require larger reservoirs or heat exchangers.

The determining factor is oil temperature. As long as the operating temperature stays below 140 degrees F the reservoir is adequate.

Reservoir material plays a role here as well. Aluminum tanks are more effective at dissipating heat than steel or polyethylene. Polyethylene reservoirs are lightweight and are a good choice for a dump trailer but should not be used in long duty cycle applications like live floors.

HOSES

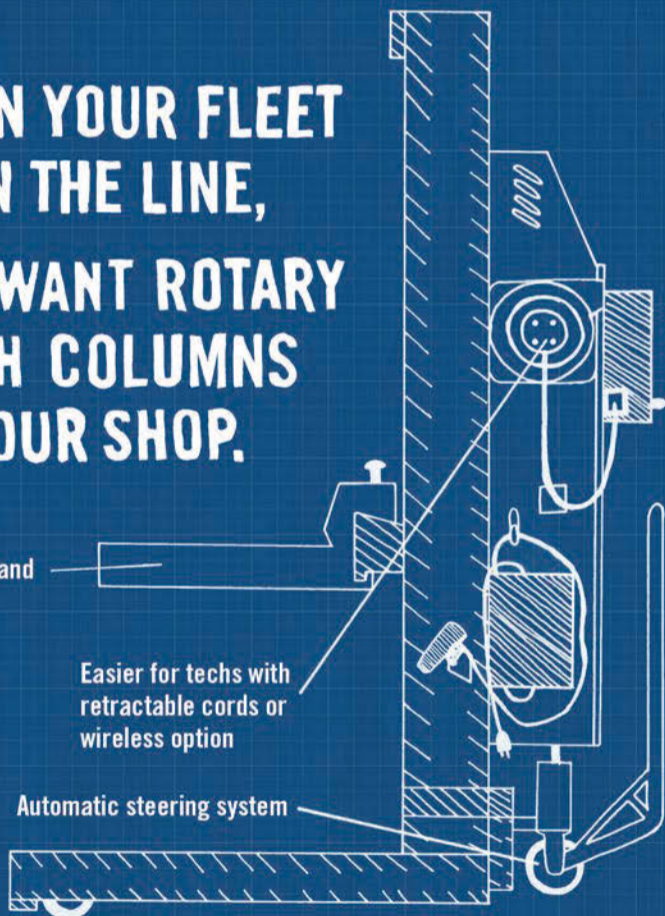
Hose size and routing are additional essential considerations. First and foremost, hoses must be adequately sized. Hose diameters should be based on system flow, not port size.

WHEN YOUR FLEET IS ON THE LINE, YOU WANT ROTARY MACH COLUMNS IN YOUR SHOP.

Faster setup and lifting speed

Easier for techs with retractable cords or wireless option

Automatic steering system



Rotary's heavy-duty Mach series is built to take on any challenge.

For more than 85 years, Rotary has set the standard in design, testing and manufacturing. Our Indiana-based employees take pride in producing world-class lifts the right way, every day. You can count on it.



Call 800-640-5438 for more information or see our complete line of heavy-duty lifts at rotarylif.com/mach4/fm.



The World's Most Trusted Lift™



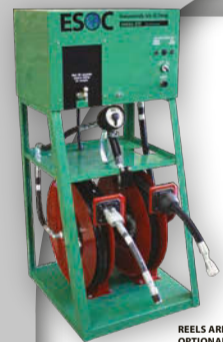
CHANGING DOWNTIME INTO ROAD TIME

ESOC OIL CHANGE SYSTEMS

ESOC SERIES 875

HOW IT WORKS:

- Oil Change in About 15 Minutes
- Reduce labor time and labor costs
- Less Down Time
- More time for your trucks on the road
- Quick Connect "No-Spill" Fittings
- Less mess, "ZERO" spill
- Minimal Technician Involvement
- Eliminates operator contact with oil
- Automatic process
- Pre-Lubed Engine
- Our smallest footprint oil change system
- Fully pneumatic – no additional power needed
- Can be vehicle mounted for off-site oil changes
- Can be vehicle mounted for off-site oil changes



REELS ARE OPTIONAL

ESOC CEX 550

BENEFITS:

- 8 foot hose (1/4") to top radiator with quick disconnect adapter head
- Sight gauge with adjustable fluid level indicator
- 14 gallon steel tank
- Heavy duty steel frame
- 3" front swivel caster
- Toolbox



ESOC SERIES 450M

BENEFITS:

- Fast and clean
- On-board fuel storage tank
- May be filled manually or using the engine's fuel pump.
- Fully pneumatic
- Portable; can be used in the shop or on-site, using the shop or vehicle's air supply
- Very easy and convenient to use
- Safe for both operator and the environment



Move At The Speed of ESOC.

For other innovative fluid solutions please contact at 866-909-3762 ext 229 or visit www.esocinc.com

Undersized inlet hoses can cause cavitation damage in a pump. Undersized pressure hoses create restriction and increase neutral system pressure which adds to system heat. Undersized return hoses can create restriction and damage the directional valve.

All of these situations will increase maintenance costs by shortening component life.

On the subject of hose, consider that the inside of a hose is not smooth. Internal friction is created as oil passes through, and friction equals heat.

When possible, where there are long runs, consider steel hydraulic tubing in place of hose. Not only is friction reduced, but the tubing will help to dissipate heat.

Also, minimize the use of fittings, particularly 90-degree fittings, and keep hose runs as straight as possible.

preventable if the oil is properly maintained.

Keeping oil clean by sampling and establishing a schedule for filter replacement, and cool by maintaining the proper level and keeping the reservoir clean will substantially increase the life of the oil and every other component. **FMX**

David Douglas is director of training and education for Muncie Power Products, which has been serving the truck equipment market with mobile power components and systems for more than 75 years. www.munciepower.com. Part of the global Interpump Hydraulics Group, the company manufactures a full line of power take-offs and hydraulic components to both SAE and DIN (the German Institute for Standardization) specifications.

REAL TRUCKS • REAL ANSWERS™



THE WORK TRUCK SHOW®

MARCH 6-8, 2013

INDIANA CONVENTION CENTER INDIANAPOLIS, IN

EDUCATIONAL PROGRAMMING BEGINS MARCH 5

THE LARGEST WORK TRUCK EVENT IN NORTH AMERICA!

- **Over 500,000 square feet of vocational trucks and equipment**
- **More than 60 intensive programs on industry topics from upfitting and regulatory compliance to OEM updates and business management**
- **Newest products and technical engineering support from more than 550 exhibitors**

REGISTER NOW!

CALL 1.800.441.6832 OR VISIT NTEA.COM

VEHICLE SERVICE PROS

To learn about Steril-Koni's new Diamond Lift high-pressure telescopic piston lift, with lifting capacities of 64,000 and 96,000 pounds and designed for ease of use and environmental containment, visit www.VehicleServicePros.com/10781120.

OIL

Oil has been described as "the forgotten component" in the hydraulic system. Oil transfers force to perform work and carries contaminants to the filters and cools other components by delivering fresh oil and transferring heat to the reservoir.

The choice of hydraulic oil is another area where the machine designer's specification is important. Secondly, your local supplier will be able to recommend the best oil for your climate and operating environment.

The life of every hydraulic component is directly affected by the choice and condition of the oil.

Two major causes of hydraulic pump failure, contamination and heat, are

TUESDAY-WEDNESDAY, MARCH 5-6



- **Intensive educational program on green initiatives for work trucks**
- **Fleet deployment experiences, data and analysis**

Visit www.VehicleServicePros.com/einquiry and enter 35



Serving the Industry Since 1964

Is It Better To Lease Or Buy Vehicles?

By Wade Vonasek, Assistant Editor

The answer boils down to each company's individual needs

Which one, buying or leasing, is the best use of capital? There is no one answer as every company is different. Factors such as how a company is capitalized and how it measures its success in regards to equity and debt will determine its best use of capital.

Fleet Maintenance picked the brains of some experts in the field of vehicle purchasing to gauge their thoughts on the subject.

"The best use of capital will depend on a company's strategy and what it is trying to achieve," says John Deris, senior vice president of national sales, fleet management solutions, Ryder System, an American-based provider of transportation and supply chain management products (www.ryder.com). "If the company needs to have cash flow, then a lease solution might work best because it will allow them to invest capital elsewhere."

If the company has the cash, then it may choose to go with a finance lease or a contract maintenance solution where a company like Ryder would provide the maintenance for the company's fleet, he says.

"For years, many fleets thought buying and owning their own trucks made the most financial sense," says Olen Hunter, director of sales, PacLease (PACCAR Leasing Company), a commercial truck leasing and rental company (www.paclease.com). "In many situations, a firm is better off investing capital in other areas of their business that generate a higher return instead of investing in a depreciating asset like a truck. Plus, numerous changes, including the increasing complexity of medium duty trucks and tractors; stricter government regulations; and the need for financial flexibility have brought full-service truck leasing to the forefront."



Depending on the situation, an organization may be better off investing capital in other areas of its business that generate a higher return instead of investing in a depreciating asset like a truck.

Photo courtesy of Navistar

"Leasing provides the most financial flexibility by allowing companies to preserve existing lines of credit while minimizing the upfront costs," says Bill Blais, strategic consultant, GE Capital Fleet Services, a provider of commercial car and truck financing and fleet management services (www.gefleet.com). "It also typically allows for 100 percent financing of the asset, which can be an important aspect for growing companies."

"Leasing allows companies to effectively use their capital or credit lines in ways more directed towards their core business," says Dean Vicha, president, NationaLease, a full-service North American truck leasing organization (www.nationalease.com). "On the back end of the term it eliminates the risk of a risky used truck market and the potential depreciation losses that can occur when it becomes necessary to dispose of the asset."

"We tell companies if trucking is not a core competency outsource it to a company like PacLease and focus on your business," Hunter adds. "Leasing companies can help a company document the full cost of operating a truck and then put together a cash flow analysis that compares leasing and owning a truck. In most cases, we find that leasing is advantageous because the leasing company benefits from economies of scale when it comes to equipment and parts acquisition."

BE INFORMED

When making the decision to either buy or lease, it is necessary to possess the right information. An

ROI (return on the investment) calculation is recommended to determine whether a company should use equity or debt to finance its equipment. It is important to consider the marginal cost of capital, the lease interest rate, any variance in acquisition cost between scenarios, the state the vehicle will be registered in and the estimated cycling parameters. The decision should be supported by a net present value comparison between leasing and owning the vehicles.

Most companies that have a fleet because is necessary in their business but it is not their core business, really need the kind of professional analysis to drill down to their actual cost of ownership," NationaLease's Vicha says. The analysis covers everything, including acquisition cost, borrowing power, depreciation schedule, disposal capabilities on the financial side and identifying the true cost of administrating - licensing, permitting, fuel tax reporting, etc.).

"Often times, a major cost savings comes from a reduction in maintenance expense because leasing companies have predictive and preventive maintenance down to a science," adds Hunter of PacLease.

PLENTY OF OPTIONS

There are many considerations to both owning and leasing trucks. With leasing, there are a variety of lease arrangements, kinds of leases and options. This leaves lots of gray area but gives a company the ability to pinpoint its needs and customize its approach.

“Some companies may choose to own their own vehicles for various strategic and tax reasons,” says Ryder’s Deris. “This, however, does not mean they also have to perform their own maintenance and keep the maintenance structure. Companies who own their own fleets can still choose outsourced maintenance services while maintaining ownership of the asset.”

“One of the primary benefits of owning trucks is the flexibility around vehicle disposition timing,” GE Capital’s Blais says. “There may also be regulatory or hazmat concerns that could make leasing difficult.”

There is a perception that truck ownership provides better control for the company, notes PacLease’s Hunter, but this may or may not be the case.

“In many situations, there is inherent risk associated with owning trucks,” he says. “Some of these risks include the value of the equipment at trade-in time, unpredictable maintenance costs over the equipment life, obsolete or stranded assets due to improper replacement cycle and increased costs caused by hiring, training and tooling technicians to keep up with ever-changing truck technology.”

VEHICLE SERVICE PROS
COM

For a list of the 12 basic items or costs to consider when making the decision to

lease or buy, visit www.VehicleServicePros.com/10785518.

LESS WORRIES

Leasing can also provide a variety of additional services. For example, some leasing companies offer substitute vehicle programs that deliver replacement units while the leased trucks are being serviced. A vehicle lease can be combined with a maintenance package.

“One key difference is that in addition to providing a financing source, a fleet management company also offers value-added services such as a managed maintenance program, truck engineering support, fuel, accident, registration, compliance management and consulting services focused on helping companies reduce total life cycle costs,” says GE Capital’s Blais.

“Leasing can give a company the ability to mini-

mize the risk of fluctuating costs in maintaining a fleet,” Vicha of NationaLease concurs. “Full-service leasing allows companies to manage their business to set fixed costs each month from their fleet of vehicles that remains consistent over the life of the truck.”

“Companies are currently experiencing a tight credit environment and may prefer to invest their cash in other areas of their business as opposed to tying it up in transportation assets,” says Ryder’s Deris. “With post-EPA 2010 engine technologies, the initial investment of buying a commercial vehicle has increased.”

“The benefits of leasing trucks are financial and operational,” Hunter adds. “Financially, a company can preserve capital for other parts of its business that generate a higher return. Operationally, leasing allows a company to focus on core functions of its business. Leasing can provide considerable flexibility to meet short-term and long-term equipment needs by custom tailoring a lease and maintenance package that matches the truck’s useful life.” **FMX**

Increase Efficiency and Reliability with Alemite’s Diesel Exhaust Fluid Systems

Designed for durability and ease of use, Alemite’s DEF line provides maximum performance.

1/2 HP DEF Dispensing System with Smart Start Technology

- Automatically turns pump on and off between dispenses
- Protects pump motor
- Includes pump, mounting bracket, hose and dispense nozzle



1/3 HP DEF Dispensing System

- New, economical offering
- Lightweight, ergonomic design with built-in handle
- Includes pump, mounting bracket, hose and dispense nozzle



DEF Hose Reel

- Stainless steel components help prevent contamination
- Heavy-gauge steel construction
- Powder-coat finish



For more information, visit our website at www.alemite.com or call 800-822-4579.

www.vehicleservicepros.com/FMInquiry and enter 36

HDA TRUCK PRIDE

WHEREVER THE ROAD TAKES YOU
WE'RE THERE

HDA Truck Pride, Keeping Your Fleet Moving Is Our Priority

HDA Truck Pride Delivers:

- National Footprint
- Premium Brands
- National Product Warranty
- Central Billing
- Training, Training and...
- More Training

Call Today: 800.432.2033
www.hdatruckpride.com

700+ PARTS LOCATIONS

400+ SERVICE FACILITIES

1 UNRIVALED NETWORK

Bendix **Gates** **WEBB**

www.vehicleservicepros.com/FMInquiry and enter 37



Factors To Consider Before Fixing Damaged Auto Glass

By Scott Gardner, Director of Technical and Operational Training, Safelite AutoGlass

Paying attention to your fleet's windshields can reduce vehicle downtime and expense

Of all the things that can go wrong with vehicles, many fleet maintenance managers think a windshield chip or small crack is the least of their worries. Despite the typical initial reaction that these are minimal damage and no big concern, a chip or crack can be a real problem - for both a fleet's drivers' safety and the organization's bottom line.

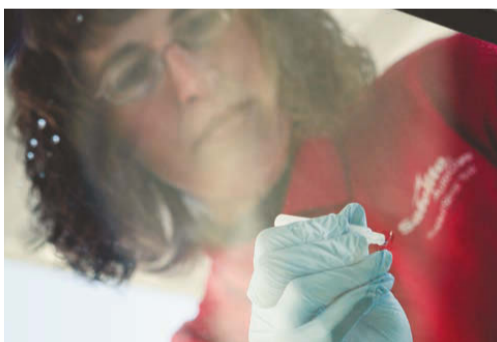
Glass damage is increasingly common because of the newer lightweight glass being used for better fuel mileage.

Here are five things to consider in how you select your partners for vehicle glass repair or replacement and how to decide upon the work to be done:

1. IS A CHIP IN THE WINDSHIELD REALLY THAT BAD?

Yes, and it is important that you don't ignore a chip. Studies show that within three years, 90 percent of chips will spread into a larger crack at any time, often when the driver is least expecting it - causing a dangerous distraction for the driver.

Secondly, the windshield plays an important role in vehicle safety. The windshield ensures that the airbags deploy properly and helps maintain a vehicle's structural integrity in the event of a rollover.



The chip repair process involves creating a vacuum over the damaged area to remove air and moisture, after which a resin is injected into the damage area, penetrating and filling the finest micro cracks. The technician pulls off the vacuum and applies a UV light that hardens the resin.

Photos courtesy of Safelite AutoGlass

Damaged glass is approximately 60 to 70 percent weaker than undamaged glass. This is a risk that can be easily avoided by repairing or replacing the glass.

2. IS A CHIP REPAIR REALLY A SAFE ALTERNATIVE TO GLASS REPLACEMENT?

Absolutely. Repairing versus replacing a windshield maintains the original factory seal. A small chip or crack can often be repaired in just 30 minutes, saving a fleet time and money.

The chip repair process works like this: A vacuum is created over the damaged area. The air and moisture is removed and the resin is injected into the damage area, penetrating and filling the finest micro cracks. The technician pulls off the vacuum and applies a UV light that hardens the resin.

Be advised: Not all auto glass and windshield repairs are equal, nor is the training the technicians receive.

By way of example, an independent and renowned testing laboratory put Safelite AutoGlass' exclusive windshield repair resin through rigorous laboratory testing along with resins used by other vehicle glass companies. The lab confirmed that Safelite's exclusive resin offers higher adhesion for a more durable repair, better aging for a visually superior repair, less risk of shrinkage causing re-appearance of chips and better color stability, meaning less risk of yellowing.

A two-day testing series of 60 windshields by Belron Technical, a leading research and development company in the vehicle glass industry, showed that under high stresses, 90 percent of unrepaired chips will crack out within minutes. Chips repaired with Safelite's exclusive resin had a zero failure rate in the same series of tests.

(Left) Depending on the extent of windshield damage, it may be more economically repaired than replaced.

Photo from iStockphoto

In addition, Belron Technical tested more than 150 windshields in cold weather conditions over 18 months and found that 80 percent of chips cracked, while those that had been Safelite repaired had a zero failure rate.

3. WHAT IF THE CRACK IS TOO LARGE TO REPAIR?

If the glass damage cannot be repaired, a replacement is necessary. The cost of a replacement varies, depending on the make and model of the vehicle.

It's important to note that all vehicle glass installed in the U.S. must pass National Highway Traffic Safety Administration baseline standards.

Be sure to work with a glass shop that offers a national warranty on both repairs and replacement for as long as you own or lease the vehicle. The warranty should also guarantee to pass lease turn-back and state vehicle inspections.

4. HOW LONG WILL A WINDSHIELD REPLACEMENT TAKE A VEHICLE OUT OF COMMISSION?

The downtime will depend on a number of variables, including how quickly the service can be scheduled, the proximity to a physical service location and availability of mobile repairs technicians.

Service appointments can often be made the same day or next day. And conveniently, many service providers, including Safelite, will come to a fleet or vehicle's location, rather than requiring that the vehicle be brought to a shop.

On average, allow for up to three hours for a windshield replacement. That includes approximately an hour for the work, and then anywhere between 45 minutes to an hour after the installation to allow for the adhesive to dry appropriately. The technician will advise you on safe drive-away times.

5. ARE THERE ANY RISKS TO MY VEHICLE?

The risk of damaging the vehicle during the replacement has decreased significantly over

the years due to enhanced technician training and the development of innovative tools.

In the case of Safelite, technicians go through several months of intensive training. Then, they apprentice with another service technician to gain additional practical knowledge and hands-on experience. Technicians can only work solo when training is complete and they

have received certification. **FMX**

As the director of technical and operational training for Safelite AutoGlass, Scott Gardner is responsible for managing the certification process and ongoing training of the company's vehicle glass technicians. Founded in 1947, Safelite has been a leader in the vehicle glass industry, promoting repairs over replacements as a smart alternative, completing approximately 1 million repairs every year. www.safelite.com.

MITSUBISHI ELECTRIC
AUTOMOTIVE AMERICA

IRONCLAD GUARANTEE
DIAMOND GARD
GENUINE OEM PARTS

MOVE OVER.

THERE'S A NEW ALTERNATOR IN TOWN.

Mitsubishi Electric Automotive America
Presents Its New Diamond Power A160™ Alternator
AVAILABLE NOVEMBER 1ST!

The new Diamond Power A160™ Brushless Alternator from Mitsubishi Electric is here, backed by the best warranty in the business.

The Diamond Power A160's class-leading efficiency ensures you save money on fuel, mile after mile. Over 100 amps output at idle keeps your electrical loads up and running. And the best-in-class power-to-weight ratio lets you haul more goods, wherever you need to go.

When choosing an alternator, make sure you're getting a good return on investment. The Diamond Power A160™ Brushless Alternator boosts your bottom line.

- 3-year / Unlimited Mile Warranty
- Warranty Re-Clocks on Replacement Unit
- Best-in-Class Power-to-Weight Ratio
- Best-in-Class Efficiency
- FREE On-Site Sales and Technical Training
- Remote Sense Standard
- Built-In Regulator Diagnostics
- Exceeds O.E. Specifications

MITSUBISHI ELECTRIC **DIAMOND GARD™**
GENUINE OEM PARTS

©2012 Mitsubishi Electric Automotive America, Inc. | www.meaa-mea.com

For warranty and other information visit: diamond-gard.com | 15603 Centennial Drive, Northville, MI 48168 | phone: 888-MELCO4U (1-888-635-2648)

Visit www.VehicleServicePros.com/einquiry and enter 38




By Doug Jones, Customer Engineering Support Manager, Michelin Americas Truck Tires

Want to get the most from your tires?

The process begins with understanding that tires are application specific

Helpful advice from an expert.
Out on the road



By Steve Rober, Schaeffer's Specialized Lubricants

Changing Seasons Affect More Than Weather

The beginning of autumn is an essential time to test your fuel and prep your storage tanks before the onset of winter. It's also a good idea to do this periodically throughout the year, just to head off any problems before they develop.


Improper fuel storage can cause far too much damage to your equipment, your productivity and, ultimately, to your bottom line. All of that from something that really doesn't require much money or effort to prevent. It just takes a little vigilance, two semi-annual maintenance sessions with your storage tanks, and some relatively inexpensive products to keep your equipment in peak shape. As my father used to say, "Take care of your gear, and your gear will take care of you."

Test your storage tanks. Schaeffer's **Fuel Dr Rx** is one such testing program that can detect bacteria and/or water contamination. If you do find evidence of bacteria contamination, thoroughly clean, dry and treat the tank with a biocide product like Schaeffer's **Fuel Shock** to eradicate the bacteria and prevent future fungal growth. To deal with water contamination, use a product like Schaeffer's **Tank Dry** to eliminate moisture and water buildup. This will provide further protection against conditions favorable to bacteria growth.

Fill your storage tanks only with fuel from reputable suppliers who can guarantee the quality of their product. This is important because bacteria and moisture are often introduced into storage tanks in poor-quality fuel.

Utilize seasonal fuel additives in your storage tanks and vehicles. Schaeffer's produces a trio of winter additives for this exact purpose: **Winterized Diesel Treat™ 2000** augments fuel lubricity and contains anti-gelling and de-icing additives. **Arctic Shield™** is a multifunctional additive formulated to eliminate moisture and gelling problems. And **Carbon Treat™ Premium Winter** can improve fuel lubricity while preventing deposits that plug fuel filters and foul injectors.

Hope this helps...



Schaeffer's SPECIALIZED LUBRICANTS
Good people. Great products.

www.vehicleservicepros.com/FMEnquiry and enter 39

It is critical for fleet managers to take a close look at their costs and determine where they can squeeze the most out of their operation and stay competitive in these challenging economic times.

There are still some fleets and individuals within the transportation industry that don't realize that tires can comprise a significant portion of their operating cost - often the third-highest cost after labor and fuel.

Depending upon the application and environment that tires operate in, tires can experience "punishment" that will shorten the life expectancy of the tires, as well as the performance. That is why it is so important to utilize the tire that has been optimized for your specific application and environment.

For example, an urban tire operating in the city experiences different challenges than one utilized in regional or long haul applications. In urban applications, the tire sidewalls take the brunt of curb damage, while treads are subject to scrubbing and punctures from nails and other debris.

Significant temperature changes can result in unanticipated pressure changes during operation. Extremely high temperatures caused by braking and overloading are also major concerns.

IT'S IMPORTANT to understand that fleets understand the technology behind tires and how to choose the right tires for their application.

In long haul, regional operations, on-/off-road, etc., the tires will face different challenges that will affect the life and performance of the tires.

Tires are application-specific and designed to deliver different performance criteria in different applications and under different conditions. The fleet must understand their application, road conditions and operating environment.

Understand Tire Technology

That's why it's important that fleets understand the technology behind tires and how to choose the right tires for their application so that the tires will provide the best overall value for the fleet and the bottom line.

While the vast majority of the commercial vehicle market has been running radial tires for several decades now, radial tire technology, which was first developed for commercial vehicles in 1953, provides the foundational basis for additional advancements, allowing tires to better operate in difficult environments. Radial tires are fundamentally different than their bias-ply predecessors.

The radial tire is constructed in two parts. First, a single layer of rubber-coated steel cables arches from one bead to the other to form the tire casing. Second, numerous rubber-coated steel belts are placed in the crown, under the tread, to form a strong stabilizing unit.

To increase a radial tire's strength, larger diameter steel cables can be used. These steel cables help reduce punctures,

tears and flats. They also help distribute heat, resulting in a cooler running tire, improving fuel economy.

The combination of stabilizing steel belts and the single-layer radial casing allows the tread and sidewall to act independently. The sidewall flexes easily under the weight of the vehicle and its cargo, while the tread helps provide even contact with the ground.

Greater vertical deflection is achieved with radial tires.

The stabilizing steel belts and radial construction help minimize tread distortion. As the sidewalls deflect, the belts hold the tread firmly on the ground, minimizing tread scrub and greatly increasing tread life.

The independent action of the tread and sidewalls keeps the tread flat on the road when negotiating curves and encountering side forces. This allows the tire to hold to its path.


By keeping the two sections free from each other, the tire's overall performance is enhanced, but the separation also allows tire designers to specifically enhance or customize the tread or sidewall area with specific rubber compounds, designs or other technologies to improve the performance of that portion of the tire.

Because of this foundational aspect of radial tire technology, tire designers can make additions to the structural support in the sidewall of tires without affecting the crown area. This allows for stronger, more damage-resistant, sidewalls.

Special rubber compounds are often used in the sidewall area as well, to further guard against cuts and abrasions from the debris or curbing typically associated with the urban application.

Other applications of tire technology can be found in the tread area, which provides several opportunities to increase the efficiency and effectiveness of a tire. By way of example, in the mixing of the tread rubber, Michelin deploys its Advanced Technology compounding, which uses layers of rubber to deal with the many demands made on the tread area of the tire.

The bottom layer of rubber is more heat-resistant to protect the casing from overheating and providing a greater opportunity that the casing could be retreaded. The top layers of tread rubber are designed with compounds that are capable of withstanding the higher degree of scrubbing that comes with frequent starts, stops and turns.

These characteristics are uncompromised by the need for tread rubber to be fuel-efficient, in addition to providing greater fuel savings. Furthermore, the tread design can provide significant improvements in wear rate and avoiding irregular wear, as well as fuel efficient designs, which tend to be more rib-like, as opposed to block-type tread designs. 

Doug Jones is the customer engineering support manager for Michelin Americas Truck Tires. He has been employed with Michelin for more than 34 years in various technical, engineering and management positions. Dedicated to the improvement of sustainable mobility, Michelin designs, manufactures and sells tires for every type of vehicle, including airplanes, automobiles, bicycles, earthmovers, farm equipment, heavy duty trucks and motorcycles. www.michelintruck.com.



DEF HANDLING EQUIPMENT

Lincoln's Diesel Exhaust Fluid (DEF) Handling Equipment line includes the air-operated, double diaphragm (AODD) and rotary AC electric pumps, 1/2" hose reels, dispense valves and meters and numerous accessories. The steel dispense valves are available with digital meters and include an automatic shut-off feature to prevent accidental overfilling. DEF meters display current and cumulative total volumes for accurate recording and can be calibrated for SAE or metric units, or for special measurements defined by the user. Lincoln's DEF equipment can be set up to pump from the customer's closed integrated bulk bon-tainer (IBC) Totes, closed 55-gal drums or custom tanks.

Visit www.VehicleServicePros.com/enquiry and enter 1



FULL RISE TELESCOPIC LIFT

Stertil-Koni's Diamond Lifts feature a heavy duty lifting capacity up to 64,000 or 96,000 lbs, and electronic synchronization for precision lifting. Made in the USA, this lift features a design where its telescopic pistons protect all the critical seals from potential damage by debris. The piston rods are hard-chrome plated for maximum protection against corrosion and wear and thus optimized to handle the harsh environments of today's busy workshops. This lift is certified to ANSI/ALI ALCTV current edition by ETL/Intertek. This environmentally sound lift utilizes biodegradable oil and the upper portion of the steel containment is hot galvanized.

Visit www.VehicleServicePros.com/enquiry and enter 4

Here's a little something to keep your engine humming this winter.

It's no secret: some additives are better than others at keeping your engine running, especially in freezing weather. Schaeffer's family of Winter Fuel Additives are a perfect example. Not only do the premium-quality ingredients provide better protection from wear due to ULSD and cold weather starts, but our specially formulated technology has proven to be more reliable than many of our competitors. If your fuel additive program let you down last winter then it's time for a better one. Schaeffer's Winter Fuel Additives offer three winter protection solutions depending on your needs. There are a lot of suppliers pining for your attention. But Schaeffer's is the only one with 173 years of engine protection experience. If you've never tried Schaeffer's, do it now and become a satisfied customer for life. It'll be one relationship you'll never regret.

Product Benefits

- Mileage Improvement
- Horsepower Improvement
- Cetane Improvement
- Emission Reduction
- Cleans Injectors
- Inhibits Corrosion
- Controls Moisture
- De-Icer
- Lowers Cold Filter Plugging Point



TIRE BEAD SEATERS

The OTC Tire Bead Seaters (Nos. 5713 and 5702) are designed to take the potentially dangerous process of seating difficult tire beads and turn it into a safe, easy and efficient job. The seater is used when a tire, new or used, is mounted on a wheel and the tire bead does not touch both sides of the wheel, making inflation possible. The air trigger on this tool expels a tremendous burst of air that inflates the tire to seat it to the wheel rim.

Visit www.VehicleServicePros.com/enquiry and enter 2



Good people. Great products.



Call 800-325-9962 and ask about our complete line of engine protecting products.

Made in the USA • Sales Representatives Nationwide • Oil Analysis Program • www.schaefferoil.com



By Stephen Howe, Field Trainer, United Rentals

How to get the most out of training software

A guide to building effective training

With so many fleets and shops moving into “paperless” work environments and/or using laptop-based diagnostic tools, software training is becoming more popular. While the purposes of new training software programs can vary greatly, there are a number of common factors that make for sound, strong software training.

What follows is a brief guide to software training for an organization that is planning to build course materials and run the training with internal resources. Whenever budgets allow, it is always acceptable, and often recommended, to consult a professional training development partner.

Ideally, students will have both a Participant Guide and a Reference Guide prepared for the training. Depending on the writing and instructional design skills of your staff, these may be done internally or externally.

The Participant Guide follows the trainer’s lesson plan, and is intended to be used during the training session itself. At a minimum, it should include a copy of the trainer’s presentation, such as slide prints, and worksheets that guide the student through hands-on portions.

The Reference Guide needs to have detailed instructions on all functions the student will use on the job, as well as a glossary of all terms, as many will be unfamiliar.

The training may or may not get into all of the details that are covered in the Reference Guide (typically not), but this publication is intended to be a permanent part of the student’s workstation, whereas the Participant Guide is primarily used for the training session only.

The software developer’s User Manual can double as a Reference Guide, though customized guides written with the end user’s job functions in mind usually work better.

Screen Awareness

There are normally a handful of computer screens that the student will interface with regularly on the job. All aspects of these screens need to be covered in detail by the training, as far as what areas of the screen are used for what purposes. Actually performing functions on these screens should be covered later in the training.

There also could be a large number of additional screens that the technician will use only occasionally. While these should be covered in training, the likelihood of them being used in a work setting soon after the training is usually low.

Therefore, make sure the technician knows how and where to find instructions for these screens in the reference materials.

After learning all of the screens and how each is to be used in a job setting, the training should cover how to move from one screen to another. Depending on the software, screen navigation can have varying degrees of complexity, and it is common for students to get lost in one area and not know how to get back. Hence, the lesson on screen navigation should include as much guided hands-on practice as possible.

Again, depending on the training software’s complexity, there are numerous new functions that the student will have to use on the job. The lesson on computer functions should ideally follow the show-demonstrate-practice model.

- Briefly list all the functions you intend to cover, and show visual support of the screen(s) used.
- Next, demonstrate how each function is performed.
- Finally, let the students practice each function in a guided activity with worksheet support.

While it is acceptable to demonstrate all functions and then have the students practice all functions, the usual lesson flow is to demonstrate a function and allow practice, then demonstrate another and allow practice, and so on.

There should be periodic reviews throughout the training. Toward the end of the training, do a master review of everything that has been covered and allow questions. Lastly, evaluate what the students have learned.

It is best to have both a written post-test that covers knowledge-based objectives, and a hands-on activity where the student performs some functions without trainer assistance. The evaluation step is critical to any training because it allows the trainer to determine what follow-up steps may be required for a given student before they return to the work setting. **FMX**

Stephen Howe is a field trainer and technical training consultant for United Rentals, the world’s largest equipment rental company with approximately 900 branch locations in North America. Howe is also a past president of the Automotive Training Managers Council (ATMC), a global organization of training managers from automotive aftermarket, OEM, supplier, service tool and training companies.

Maintains Floors for less than \$1 per gallon.

CONCENTRATED Cleaners
waterbased safe Industrial strength

SAFE
BIODEGRADABLE NON-TOXIC NON-CORROSIVE

For **FREE** sample call 1-800-528-0334 or visit www.oileater.com

... Introducing

NATURALS

Made using Renewable Resources

ALL NATURAL ABSORBENTS
Keep Floors Dry & Safe

“Oil Eater NATURALS® typically ABSORB MORE & COST LESS than their polypropylene counterparts.”

NEW

Pads
Snakes
Pillows
Drip Pans

SAFE
MADE WITH RECYCLED & RENEWABLE RESOURCES

made using plant by-products

For **FREE** sample call 1-800-528-0334 or visit www.oileater.com

CALL FOR FREE SAMPLE

www.vehicleservicepros.com/FMInquiry and enter 41



FOUR-POST LIFTS

Mohawk's TR-19 and TR-25 four-post automotive lifts are available with tracks lengths up to 20' in length for the TR-19s and up to 30' for the TR-25s. The lifts have a full 6' of unrestricted under-vehicle access.

Visit www.VehicleServicePros.com/enquiry and enter 3



RP1210 AND J2534 REPROGRAMMER

Drew Technologies' TVIT offers flexibility, rugged performance and advanced software for improved diagnostic and flash repairs for today's heavy duty vehicles. The TVIT provides vehicle coverage for the most popular diagnostic and reprogramming services from Allison, Cummins, Freightliner, Mack Trucks and more. Supporting RP1210 systems, TVIT is equipped to also provide coverage for manufacturers using SAE J2534 standards found in both heavy and medium duty vehicles.

Visit www.VehicleServicePros.com/enquiry and enter 5



VEHICLE DATALINK ADAPTER

The Dearborn Protocol Adapter, No. DPA 5, is a Dual CAN or Quad CAN vehicle network translator device offering OEM diagnostics and ECU reprogramming capabilities in a wireless device for both the commercial vehicle and automotive industries. The DPA 5 Bluetooth device utilizes both SAE J2534 and TMC RP1210 as co-existing application programming interfaces. It combines diagnostic and reprogramming capabilities in a multi-application environment enabling network communication regardless of vehicle type. The DPA 5 facilitates diagnostics, End-Of-Line (EOL) testing, reprogramming and re-flashing of vehicle ECUs. The DPA 5 is bundled with free DG Diagnostics and Adapter Validation Tool software.

Visit www.VehicleServicePros.com/enquiry and enter 6



save fuel . save tires
the Original in TPMS



add safety . add savings
proudly Made in the USA

Win
THE BEST IN TPMS
PressurePro Tire Pressure Monitoring

For 22 years, PressurePro has provided the market's most innovative Tire Pressure Monitoring technologies, helping customers add savings, safety & efficiencies to their operations. With the market's most comprehensive catalog and numerous advanced monitoring options - including remote monitoring (using RS232/J1708 & CANbus capacity), data logging, fully automated drop-&-hook systems and the ability to integrate to your current or future Telematics products, PressurePro gives your fleet the tools needed to keep tires and profits...
FULLY INFLATED.

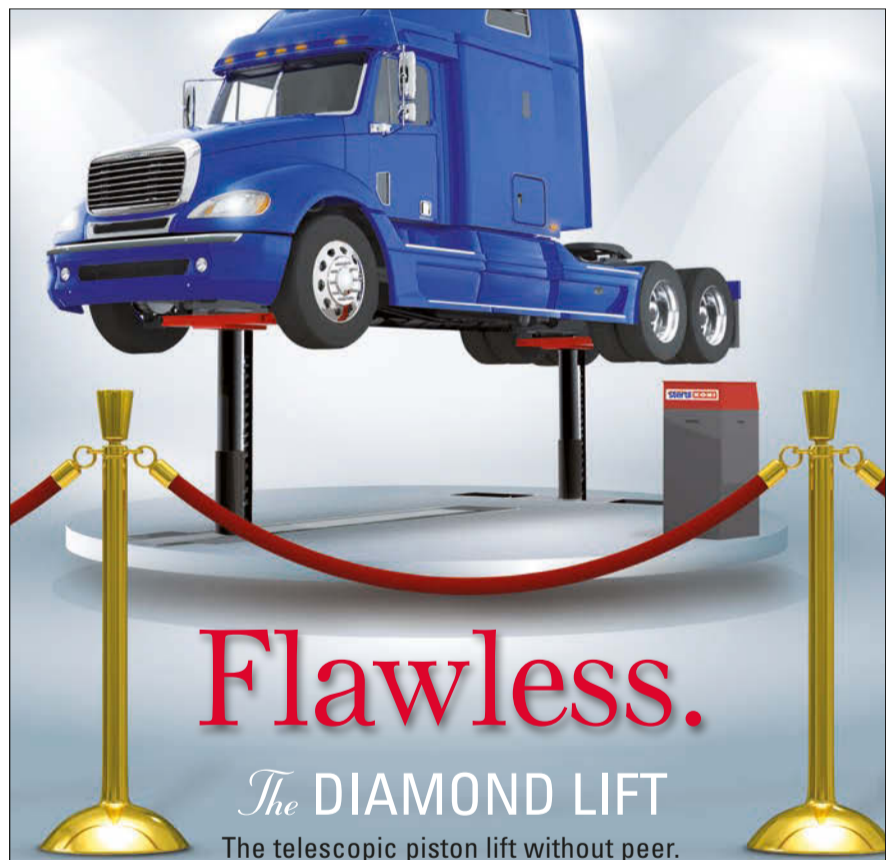
WIN A PRESSUREPRO SYSTEM! PressurePro joined with Fleet Maintenance Magazine for the Great Prize Giveaway. Visit vehicleservicepros.com for more info. on how you can win.



VEHICLESERVICEPROS

call us, toll free: 800-959-3505
find us on Facebook: Advantage PressurePro
Tweet us at: PressureProTPMS
visit www.PressurePro.us for more information

www.vehicleservicepros.com/FMEInquiry and enter 42



Flawless.
The DIAMOND LIFT

The telescopic piston lift without peer.

Optimum flexibility, productivity and durability in heavy-duty lifting

For all over-the-road vehicles | Lifts vehicles up to 96,000 lbs.
Designed for long life | Hard-chrome plated telescopic piston rods
Industry changing mechanical locking system | Easy to service, accessible from floor level
Superior lifting and containment | Protects against corrosion and electrolysis
Long life and ROI | Designed up to a standard — not down to a price point.



Contact us today
800-336-6637
www.Stertil-Koni.com



www.vehicleservicepros.com/FMEInquiry and enter 43



By Tim Kraus, President and COO,
Heavy Duty Manufacturers Association (HDMA)

The 2013 Heavy Duty Aftermarket Week

North America's largest gathering of the independent heavy duty aftermarket industry

DETROIT RADIATOR CORPORATION

ORC

IN IT FOR THE LONG HAUL

800.525.0011

HEAVYDUTYRADIATOR.COM

NEW HOURS 8:00AM-6:00PM EST!

CHARGE AIR COOLERS

RADIATORS

AC CONDENSERS

LOCATIONS

MICHIGAN • ALABAMA

COLORADO • FLORIDA

MARYLAND • UTAH

www.vehicleservicepros.com/FMInquiry
and enter 44

HDMA is made up of 188 North American suppliers of new equipment, vehicles and replacement parts to the global commercial vehicle industry. One of the industry events that HDMA is involved in as an owner or part owner with other associations is the annual Heavy Duty Aftermarket Week (HDAW). Held each January in Las Vegas, it is an action-packed week of networking, education, face-to-face meetings and all of the typical convention/conference type of activities.

The eighth annual HDAW will take place this coming January 21 to 24.

The purpose of HDAW is to bring together about 550 distributors and service shop operators and their 250 supplier companies, consultants and the trade media for a week of all of the aforementioned activities.

Each spring, a large group of industry volunteers and association staff meet to begin the planning process for the next event. Topics to cover are selected from feedback received from distributor and supplier attendees through a post-conference survey after each HDAW and from the various boards of the participating associations.

The objective of the annual planning process is to put together a comprehensive program that will provide as much useful information as possible to make sure distributors and shop owners return each year. And they do return. The audience has ranged from 1,300 to nearly 2,000 for the past seven HDAWs.

Education is the main emphasis for HDAW, chiefly on best practices, new innovations, new management methods and marketing approaches.

The Program Focus

The theme – and thrust – for HDAW 2013 is *Formula for Success: Focus on the Future*. The planning group feels that by having a strategic view of the market, each distributor, shop operator and supplier attendee can plan for the constant changes in the market.

The general sessions of HDAW 2013 will key in on the economy and on how to build for tomorrow and successfully compete in an increasingly competitive market. Four separate sessions will deal with:

- Building and promoting an organization's own brand.
- New technologies and what a distributor and shop owner need to do to prepare (think natural gas and hybrid power).
- How to unbundle services and when to charge for the things we all used to give out of goodwill to the customer.
- How to look at a core business' competencies and how to find ways to outsource certain elements that create problems for the average small business.

An optional session this year has been developed specifically for shop owners and managers. Being held on the opening day of HDAW, much of this new program has to do with modernizing shop operations to help an independent shop operator better compete directly with truck dealers. There will also be a service program, named SOLD (Service Opportunities and Learning Day).

Summing Up HDAW

There are several hours scheduled during HDAW for an excellent product expo with the senior management of most of the exhibiting suppliers on hand. There are also about 12 hours set aside for a unique feature of HDAW - pre-scheduled one-on-one meetings between distributors and shops and top executives from industry suppliers. Many attendees view this as the highest value of the conference.

This column may sound like a big commercial for HDAW 2013, and perhaps it is somewhat. However, the majority of the sponsoring organizations are non-profit industry groups whose primary mission is strengthening the independent heavy duty aftermarket, and HDMA feels that it is important to get behind that objective.

We and our two partners - Commercial Vehicle Solutions Network (CVSN) and Heavy Duty Distribution Association (HDDA) - are all part of those non-profit groups and exist solely for the betterment of the industry.

Visit HDMA's website at www.hdaw.org for more information. **FMX**

Tim Kraus is the president and chief operating officer (COO) of the Heavy Duty Manufacturers Association (HDMA). Prior to joining HDMA, he served in various executive positions with heavy duty industry parts manufacturers. The Heavy Duty Manufacturers Association exclusively serves as the industry voice of the commercial vehicle product manufacturers. It is a market segment affiliate of the Motor & Equipment Manufacturers Association (MEMA). www.hdma.org.

28,000 OEM FAULT CODES. ONE SOLUTION.

JPRO[®]
COMMERCIAL FLEET DIAGNOSTICS

COMPLETE CLASS 7-8 COVERAGE!

HEAVY DUTY #11201

ENGINES:

- ▶ CAT
- ▶ Cummins
- ▶ Mercedes
- ▶ Detroit Diesel
- ▶ International
- ▶ Volvo/Mack

TRANSMISSIONS:

- ▶ Allison
- ▶ Eaton Fuller
- ▶ Volvo
- ▶ ZF

ABS & TRAILERS:

- ▶ Bendix
- ▶ Haldex
- ▶ Wabash
- ▶ Wabco

VEHICLES (BODY & CHASSIS):

- ▶ Freightliner
- ▶ Sterling
- ▶ Western Star
- ▶ Thomas Built
- ▶ Kenworth
- ▶ Peterbilt
- ▶ Volvo
- ▶ Mack
- ▶ International
- ▶ International Bus
- ▶ Blue Bird

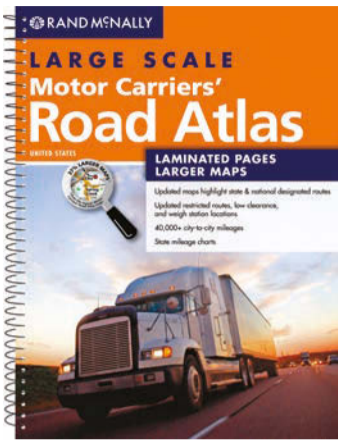


Powered by
NOREGON SYSTEMS
www.noregon.com

Contact JPRO[®] Product Sales at:
336-615-8531
www.JPROFleetProducts.com
fleetsales@noregon.com

JPRO[®]
COMMERCIAL FLEET PRODUCTS
© 2012 Noregon Systems, Inc.

www.vehicleservicepros.com/FMInquiry and enter 45



ROAD ATLAS

Rand McNally's large scale motor carriers' road atlas 2013 edition features tear-and water-resistant pages, a spiral binding for stay-flat pages and maps that are larger with bigger type than those in the regular atlas. The large version includes completely revised state and province maps with better urban area representations than in the past, more spatially accurate road networks recalculated mileage representations, larger map scale and larger type font on the maps, anti-glare pages, more city maps, easier-to-read map coloring of state-designated truck routes and direct links to industry information and construction projects to help in planning or while en route.

Visit www.VehicleServicePros.com/einquiry and enter 7



ECONOMY BASECOAT

PPG Commercial Coatings' Delfleet Essential Basecoat, a 3.5 VOC basecoat designed to offer quality at a competitive price, the company says. It can be used for overall color repair, refurbishing and striping. The basecoat features faster dry speeds than single-stage topcoats to help shops increase productivity and efficiency. The fast dry times make it ideal for two-tone jobs or striping. Since the basecoat is mixed from the same color formula as the single-stage, lower shop inventory is possible. When used with ESC621 clearcoat, a three-year warranty is offered.

Visit www.VehicleServicePros.com/einquiry and enter 8



CONCENTRATED WASHING SOLUTION

Kafko International's Oil Eater Fleet Wash makes it easier to wash away diesel, oil, grease, dirt and bird droppings from trucks and other heavy equipment. Eco-friendly Oil Eater features a biodegradable composition that will not corrode floors. It can also be used in friction and no-touch washing as long as it is diluted. It is designed to work in hard and soft water and lubricate brushes and can be used in automatic and high-pressure, self-service wash systems. The solution is safe for polished aluminum, rubber, vinyl and paint when used as directed. Available in a 5-gal bucket and 30- and 55-gal drums. A sample is available upon request.

Visit www.VehicleServicePros.com/einquiry and enter 13

BEAD BAZOOKA

The World's Most Powerful Bead-Seating Device Just Got Bigger!!



You asked for more power and the XL delivers:

- The XL creates 100% more energy at release
- The 9 liter tank weighs only 15 lbs.
- The XL adds OTR and AG tires to the list of what tires the Bead Bazookas™ will work on.
- Both models are ASME, CE, TUV, and CRN tested and certified.
- New grip with added texture for better handling and a more ergonomic feel

Visit www.GaitherTool.com for more on both Bead Bazooka versions™ and all Gaither's products.

Gaither Tool Company, Inc.
sales@gaithertool.com • T: 800-452-5010 • F: 217-245-0940

www.vehicle-service-pros.com/FMEInquiry and enter 47




INSTALL WITHOUT PULLING THE TRANSMISSION

"The Original Two Piece"

The One Truckers Ask For

2 MODELS AVAILABLE
 2 in. SB 200
 1 3/4 in. SB 175

 We also manufacture one piece models at competitive prices

"Improvements made over the years"

- Installs in 1 hour without pulling transmission
- Saves down time and money
- Design—breaking surface protects tabs
- Heat treated for long life
- Recommended for 13 speed transmissions and under
- Patented: U.S.-Canada

BABCOCK CLUTCH BRAKE, INC.

1-800-694-9083

Email bcbisb200@gmail.com
www.BabcockClutchBrake.com

Made in U.S.A.



www.vehicle-service-pros.com/FMEInquiry and enter 46

SUSPENSION AND DRIVELINE TOOLS



U-JOINT PULLERS



PITMAN ARM PULLERS



AXLE SHAFT PULLERS



SLACK ADJUSTER PULLERS



WHEEL STUD SERVICING



YOKE PULLERS



SPRING PIN & BUSHING PULLERS



1 800 661 4661

WWW.TIGERTOOL.COM



www.vehicle-service-pros.com/FMEInquiry and enter 48



By Joel Levitt, President, Springfield Resources

What's the fuss with wrench time?

The concept can improve productive maintenance and repair activity

DUMP TRUCK MAINTENANCE

"Makeshift supports just wont cut it."



Each year, hundreds of serious injuries and fatalities occur when unsecured or improperly secured dump beds fall while workers are performing dump truck maintenance.

Dump-Lok solves this dangerous problem.

- Steel braces lock a truck's dump bed in the raised position, preventing it from falling in cases of system failure or operator error.
- Safely holds dump beds at angles higher than most dump truck manufacturer body props.
- 50,000-lb or 75,000-lb capacity per pair.
- Improves workshop safety.
- Decreases liability.
- Universal design.

Be safe. Support your technicians.

DUMP-LOK
MADE IN THE USA

A PRODUCT OF
WORKSAFE USA, INC.

New territories for distributors available.

(217) 553-0963 or hking@worksafeusainc.com
www.dump-lok.com

www.vehicleservicepros.com/FMEInquiry and enter 49

Road gators eating at your bottom line?



Bite back.

Tire Pressure Monitoring Systems for Truck Fleets

Underinflation can cause premature wear and tear and lead to catastrophic tire failures which can take a big chunk out of your budget. **The Doran 360™ Tire Pressure Monitoring Systems** continuously monitor the pressures in your tires and provide real-time alerts with any drop below the customizable limits that you want to maintain in your tires. The wireless valve stem-mounted sensors and monitor were designed to hold up to the rigors of the road, with straightforward installation and simple programming steps. **Contact us to learn more about how the Doran 360™ TPMS can help you reduce your tire repair and maintenance costs.**

866.816.7233

www.doranmfg.com

Doran Manufacturing, LLC | Cincinnati, OH

www.vehicleservicepros.com/FMEInquiry and enter 50

Wrench time is the amount of productive time in a day. It is the time spent actually doing PM, corrective maintenance or even fixing breakdowns. It does not include getting parts, manuals, driving to a broken down unit, jockeying units in the yard, etc.

Traditionally, wrench time was defined as time spent by the worker with tools working on the machine. It includes direct troubleshooting. By convention, we now include LOTO (lockout/tagout) and confined space entry setup as part of wrench time.

How long does it take to repair a tire or replace a pump seal? If you were thinking of the pure work time and assumed everything needed was right there in front of you, then you would be thinking of wrench time. But if you were thinking of the time from when the job is handed out to when the worker is available for the next job, then you are thinking of work order time.

Wrench Time and Work Orders

There is the misconception that wrench time can be derived from the work order system.

Actually, there is no way to derive wrench time from work orders. The reason is that the work order is at best an approximate document. Minor (and some major) non-work activities are just not recorded.

Of course, you can estimate wrench time by multiplying the work order time by 33 percent, but the lack of granularity minimizes the usefulness.

Why is this important? Because all your productive maintenance and repair activity come from your wrench time. Obviously, if you have enough people for all your workload and projects then wrench time is of lesser importance. But if you struggle to meet all your demands, then the wrench time becomes urgently important.

Non-Wrench Time

Another way of thinking of the non-wrench time is to think of friction. A certain amount of friction is needed to make things work. A certain amount of set-up time is needed to do maintenance. But an excessive amount of friction soaks up the energy until eventually no useful work is done.

Studies done a while ago, before LOTO rules were put into place, show that a typical maintenance technician or electrician only spends around 168 minutes of a 480-minute day doing maintenance work - called wrench time.

There are two ways to obtain accurate wrench time. The hard way is to position yourself so you can see most of the workers and then tabulate how much time is spent doing what. The easy way

Activity	Percentage and minutes per day	
Receiving instructions	5%	24
Obtaining tools and materials	12%	58
Travel to and from job (both with and without tools and materials)	15%	72
Coordination delays	8%	38
Idle at job site	5%	24
Late starts and early quits	5%	24
Authorized breaks and relief	10%	48
Excess personal time (extra breaks, phone calls, smoke breaks, slow return from lunch and breaks, etc.)	5%	24
Direct actual work accomplished (as a percentage of the whole day)	35%	168

The findings from the most popular wrench time study.

is to use work sampling. A simple way to understand work sampling is to imagine taking randomly timed snapshots of the whole shop floor wherever anyone would be working, then tabulating those random snapshots into a table of check marks per activity. Once you have enough observations, you can determine the number of observations needed to determine wrench time.

Work sampling basics can be found at www.work-sample.com/introduction-to-work-sampling.html.

Remove Barriers to Improvement

Why bother with wrench time? If you remove the barriers the wrench time will improve. The barriers to improved wrench time include everything from inefficient storeroom systems to inadequate coverage by certain crafts. Use work sampling to discover where lost time is hiding.

One of the great contributions of the lean maintenance crowd was to take your wasted time and see if an intervention would reduce the waste. The process is to make what is called a Pareto chart where the losses are listed by the size. This information can be used to brainstorm ways of reducing the wasted time, hopefully without unintended consequences.

In the next column, I will discuss some of the wasted time that was found by work sampling and what could be done to improve the wrench time. **FMX**

Joel Levitt has trained more than 6,000 maintenance leaders from more than 3,000 organizations. Since 1980, he has been the president of Springfield Resources, a management consulting firm that services a variety of clients on a wide range of maintenance issues. www.maintenancetraining.com.



CLEANING TOWELS

Wonder Works Products' Tub O'Towels cleaning towels are said to offer twice the size of typical cleaning wipes, with a thicker, more durable muscle-weave towel-like construction. Tub O'Towels can quickly and easily clean up tough messes like caulk, ink, paint, tar, grease, permanent marker and more. The unique citrus formula contains nine specific cleaning ingredients, plus lanolin, aloe vera and vitamin E, making the product easy on hands.

Visit www.VehicleServicePros.com/einquiry and enter 14



AIR-DAMPING SYSTEM

Firestone Industrial Products' Airtide integrative air-damping system offers a lighter-weight alternative to cab mount suspension applications, providing the functionality of an air spring and shock absorber in a single part. The system is comprised of an exterior bellow made of natural rubber that encompasses a proprietary, shock-absorbing module. Preliminary testing indicates a notable reduction in the transmission and frequency of vibration when compared to traditional air spring/shock absorber or air spring/hydraulic damper configurations. This system offers weight reductions of up to three lbs per spring.

Visit www.VehicleServicePros.com/einquiry and enter 15



ONBOARD TRUCK SCALE TECHNOLOGY

TruckWeight's Virtual Weigh Station allows users of the company's onboard wireless sensors for mechanical and air suspensions to quickly and easily monitor and record weights. Using a small TruckWeight receiver with a USB cable that connects to any Windows-based laptop in the cab or desktop computer in the office, weights are then received from the TruckWeight onboard sensors. With a range of 500', the software records individual axle weights, as well as gross vehicle weights, with an easy touch to change from rig to rig, and automatically generates reports in an Excel format.

Visit www.VehicleServicePros.com/einquiry and enter 16



HDAW13

Heavy Duty Aftermarket Week '13

**The Mirage, Las Vegas
January 21-24, 2013**

Connect face-to-face with the people that are driving today's independent heavy duty aftermarket.

Packed with expert presentations, seminars, pre-scheduled one-on-one meetings, the HDAW Product Expo and multiple networking opportunities.

Make your reservations now and prepare to build a foundation for success in your business at HDAW13.



Visit www.hdaw.org for details and registration information.



Formula
for **Success**

FOCUS ON THE FUTURE



Visit www.VehicleServicePros.com/einquiry and enter 51



By Sandeep Kar, Global Director, Commercial Vehicle Research, Frost & Sullivan

Major heavy duty truck OEMs change global platform strategies

Multi-national truck platforms coming to North America

Seal Out Downtime

Let Grote Show You How

Corrosion in your trailer wiring lowers your profitability and your CSA scores.

Grote's modular Ultra-Blue-Seal® harnesses have



been preventing expensive downtime since 1983.

Our male pin lamp connectors seal out corrosion causing water, salt, and dirt. Their Grease Groove design keeps dielectric grease from squeezing out and ruining a good connection.

Keep water on the outside of your rig where it belongs.

Go with Grote



The first name in vehicle safety systems®

To learn more, visit grote.com

www.vehicleservicepros.com/FMInquiry and enter 52

It has been about 10 years since western OEMs started entering Brazil, Russia, India and China (BRIC) markets with serious intent. Since then, the very face and structure of the global heavy duty truck market has changed. Markets considered as an afterthought a few decades ago are now dictating the course of global commercial vehicle demand and industry's growth.

The seismic changes shaping the commercial vehicle industry globally have truly flattened the world, as OEMs from both triad and non-triad markets are aggressively competing for sustainable and robust growth. As OEMs begin developing growth strategies in this flat-world eco-system, global – not local or regional – platforms have emerged as a major requirement for any OEM with strategic intent and hunger for global growth.

Frost & Sullivan's global Commercial Vehicle Research program has recently published a comprehensive study titled *Strategic Analysis of Platform Strategies of Major Heavy Duty Truck Manufacturers*. In developing this study, we derived that the concept of global platforms is so new in the commercial vehicle industry that there is no harmonized definition that exists among OEMs.

Global Platforms

This led the research team to create a globally standardized definition based on the unique definitions that each OEM seems to use. By Frost & Sullivan's definition, a global truck platform can be termed as "a single set of common design, engineering, and manufacturing elements shared between different products/brands/marquee within the same organization or between organizations."

The study, developed through intensive evaluation of platform strategies of 12 leading global OEMs, concludes that by 2018, on average, 30 percent of all heavy truck production of top 12 OEMs will be based on global platforms, and 29 heavy duty truck models globally will be based on global platforms.

Half of the top 12 OEMs will, in effect, increase the number of dedicated global platforms, while the remaining six will rely heavily on the global platforms that are currently in production.

While North American-based OEMs, such as Navistar and Paccar, are also increasingly showing interest and activities in this area, and are developing such platforms in global markets, success potential of such platforms in their home market is proving to be relatively low owing to the dominance of conventional designs in North America. This is also creating hurdles for European and Asian OEMs looking to bring global platforms into North America.

However, such barriers are not preventing OEMs, such as Daimler and Volvo, to increasingly share technologies, components and systems across global platforms and regional North American platforms in areas ranging from powertrain to chassis and safety technologies to telematics.

Global platform development and execution may appear to be just a triad OEM strategy to penetrate growth markets, reduce manufacturing costs and complexity in domestic and

global markets and enhance margins. However, this strategy is also being feverishly pursued by BRIC OEMs to develop truck models for both developing and developed markets.

Vertical Integration

Vertical integration seems to be the manifestation of global platform strategies of some OEMs, such as Daimler and Volvo, as it enables them to control both margins and product differentiation. In fact, vertical integration is actually posing a threat to current truck sales culture in North America, where trucks are pulled by end-users through spec'ing, as opposed to Europe where trucks are pushed by OEMs.

While vertical integration of key vehicular systems and modules may prove to create barriers for Tier-1 suppliers, it is also opening up opportunities for "virtual" integration.

OEMs' global platform strategies, especially with BRIC OEMs, are expected to partially hinge on the availability of Tier-1 suppliers that have the footprint and scale to support them as they go global, while also partially relying on local suppliers in foreign manufacturing locations that have the expertise and attractive pricing value propositions to develop and deliver cost competitive trucks.

Tier-1 suppliers such as Cummins, Eaton, ZF, Wabco, etc., are poised to support OEMs from both developed and developing countries in creating strong global platforms.

The global heavy duty truck market is just about getting

HALF OF the top 12 heavy truck OEMs will increase their number of dedicated global platforms.

ready for a prolonged love affair with global platform strategies. As it embraces these strategies with open arms and looks to benefit from their effective execution, it will become imperative that OEMs do not remain myopic in developing these platforms for triad and BRIC markets alone.

Frost & Sullivan is forecasting global heavy duty truck production from global truck platforms to reach approximately 612,000 units by 2018, which is nearly double of global platform-based truck production levels in 2011. This implies that service and maintenance principles and practices of heavy duty trucks that will be sold in North America in the coming years will change dramatically over the next 5 to 10 years. **FMX**

Sandeep Kar is the global director of commercial vehicle research for Frost & Sullivan's Automotive & Transportation business. Among his areas of expertise are global commercial vehicle markets and technologies, including powertrain, chassis, safety, telematics and regulation compliance technologies. Frost & Sullivan provides in-depth research and best-practice models to drive the generation, evaluation and implementation of powerful growth strategies for a broad range of industries. www.frost.com.

ADVERTISER INDEX

ADVANTAGE PRESSURE PRO.....23	GAITHER TOOL COMPANY, INC.....25	MOHAWK LIFTS.....9	SHELL OIL.....31
ALEMITE.....17	GROTE INDUSTRIES.....28	NAFA.....6	STERTIL KONI.....23
BABCOCK CLUTCH BRAKE, INC.....25	HADA TRUCK PRIDE.....17	NEXIQ/SNAP-ON DIAGNOSTICS.....2, 7	THE PENRAY COMPANIES.....3
CITGO PETROLEUM.....11	HDMA.....27	NOREGON SYSTEMS.....24, 32	TIGER TOOL INTERNATIONAL.....25
DETROIT RADIATOR CORP.....24	HUNTER ENGINEERING.....13	NTEA.....15	VMAC.....6
DG TECHNOLOGIES.....10	KAFKO INTERNATIONAL.....22	PPG COMMERCIAL COATINGS.....5	WALTON COMPANY.....7
DORAN MANUFACTURING.....26	KARCHER COMMERCIAL.....10	REALWHEELS COVER COMPANY, INC.....30	WORKSAFE USA INC.....26
ESOC.....14	MAHA USA.....30	ROTARY LIFT.....14	
ESPAR HEATING SYSTEMS.....13	MITSUBISHI ELECTRIC.....19	SCHAEFFER OIL.....20, 21	

Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title Fleet Maintenance	2. Publication No. 020-239	3. Filing Date September 25, 2012
4. Issue Frequency February, March, April, May, June, July, August, September, October, December	5. No. of Issues Published Annually 10	6. Annual Subscription Price Free to Qualified Subscribers
7. Complete Mailing Address of Known Office of Publication (Street, City, County, State, and Zip+4) Cygnus Business Media, Inc. 1233 Janesville Ave PO Box 803 Fort Atkinson, WI 53538	Contact Person Terri Pettit Telephone (920) 563-1727	
8. Complete Mailing Address of Headquarters or General Business Office of Publisher Cygnus Business Media, 1233 Janesville Ave, PO Box 803, Fort Atkinson, WI 53538		
9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor		
Publisher (Name and Complete Mailing Address) Sarah Sheistrom 1233 Janesville Ave Fort Atkinson, WI 53538		
Editor (Name and Complete Mailing Address) David Kolman 1233 Janesville Ave Fort Atkinson, WI 53538		
Managing Editor (Name and Complete Mailing Address)		
10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)		
Full Name Complete Mailing Address Cygnus Business Media 1233 Janesville Avenue, Fort Atkinson WI 53538		

13. Publication Title Fleet Maintenance	14. Issue Date for Circulation Data Below September 2012	
	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total No. Copies (net press run)	62908	64093
(1) Outside County Paid/Requested Mail Subscriptions stated on PS Form 3541. (Include direct mail request from recipient, telemarketing and internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)	56616	60694
(2) In-County Paid/Requested Mail Subscriptions stated on PS Form 3541. (Include direct mail request from recipient, telemarketing and internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)	0	0
(3) Sales through Dealers & Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS.	11	9
(4) Requested Copies Distributed by Other Mail Classes Through the USPS. (e.g. first-class Mail)	0	0
c. Total Paid and/or Requested Circulation (Sum of 15b(1), (2), (3), and (4))	56627	60703
(1) Outside County Nonrequested Copies stated on PS Form 3541. (Include Sample copies, Requests Over 3 years old, Requests Induced by a Premium, Bulk Sales and Requests including Association Requests, Names obtained from business directories, Lists, and other sources.)	5734	1671
(2) In-County Nonrequested Copies stated on PS Form 3541. (Include Sample copies, Requests Over 3 years old, Requests Induced by a Premium, Bulk Sales and Requests including Association Requests, Names obtained from business directories, Lists, and other sources.)	0	0
(3) Nonrequested Copies Distributed Through the USPS by Other Classes of Mail. (e.g. First-Class Mail. Nonrequested Copies mailed in blocks of 10% Limit mailed at Standard Mail or Package Service Rates)	0	0
(4) Nonrequested Copies Distributed Outside the Mail (Include Pickup Stands, Trade Shows, Showrooms, & other sources)	307	1475
e. Total Free Distribution (Sum of 15d(1), (2), and (3))	6042	3146
f. Total Distribution (Sum of 15c and e)	62669	63849
g. Copies Not Distributed	240	244
h. Total (Sum of 15f and g)	62908	64093
Percent Paid and/or Requested Circulation (15c / 15f x 100)	90.4	95.1

11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or more of Total Amount of Bonds, Mortgages or Other Securities. If none, check here. None

Full Name Complete Mailing Address

Black Diamond Capital Management LLC 2325 Lakeview Parkway, Suite 700 Alpharetta GA 30009

Van Kampen Senior Income Trust 1 Parkview Plaza, Suite 100 4th Floor, Oakbrook Terrace IL 60181

Van Kampen Senior Loan Fund 1 Parkview Plaza, Suite 100 4th Floor, Oakbrook Terrace IL 60181

Genesis CLO 2007-1 Ltd 650 5th Ave 9th Floor, New York NY 10019

Genesis CLO 2007-2 Ltd 335 N Maple Dr Suite 1300, Beverly Hills CA 90210

Morgan Stanley Prime Income Trust 1 Parkview Plaza, Suite 100 4th Floor, Oakbrook Terrace IL 60181

Woodside Capital Partners V LLC 25 Mall Rd, Burlington MA 01803

Granite Ventures I Ltd (Stone Tower) 152 W 57th St, 33rd Floor, New York NY 10019

16. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the October 2011 issue of this publication.

17. Signature and Title of Editor, Publisher, Business Manager, or Owner

September 26, 2012

Julie Nachtigal, VP Audience Development

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

Target
your audience

with classified advertising in

FLEET MAINTENANCE

Contact Michael Braun Today!
Phone: 800.547.7377 ext. 1396
Michael.Braun@cygnus.com

ENGINE OIL DRAIN VALVE

DRAIN YOUR ENGINE OIL WITH THE TOUCH OF A FINGER

www.FumotoUSA.com
Fumoto Engineering of America (425) 869-7771

Factory Direct American Made

Electric/Hydraulic Fits any tractor Pays for itself

Shop Presses

FIFTHWHEEL WRECKER

DIRECT Equipment Supply

800-992-1478
www.DirectEquipmentSupply.com

50-100-150 TON Air or Electric Operated

The INDUCTOR®

ProMax/Max

The Only Fully Warrantied Induction Heater!

Toll Free 877-688-9633
www.theinductor.com

THERE'S ONLY ONE ORIGINAL!

CHEETAH® BEAD SEATING TOOL

AVAILABLE IN Steel or Aluminum

TSI TIRE SERVICE EQUIPMENT

www.tsissg.com

Imperial®
National Distributor of Quality Maintenance Supplies Since 1958

NEW!

IMPERIAL CROWN™ PREMIUM SERIES WIPER BLADES WITH PTFE

- Premium all-metal frame with PTFE blended rubber, graphite-coated blade.
- Reinforced frame provides a longer life of the blade

OVER 25,000 PRODUCTS IN STOCK.

PHONE: 1-888-838-6718
Fax: 1-800-553-8769 • www.imperialsupplies.com
789 Armed Forces Drive, Green Bay, WI 54304

THE ONE AND ONLY ORIGINAL!

Quick Chuck Adapter
Fits all popular 1" arbor brake lathes. 3 Jaw Chuck Design eliminates cones and clamping cups.

HD Truck/Bus Brake Lathe Adapter

Fits any 1-7/8" Arbor Brake Lathe

Wheel Balancing Solutions

Balancer Chuck (19.5" & 22.5" wheels)

An accurate mounting is achieved with 3 jaws vs. a steep cone assuring a balanced wheel.

WY International Inc.
Call 323-726-8733
www.quickchuckadapter.com

ADVERTISE HERE

Contact Michael Braun for advertising information:
800-547-7377 ext. 1396
Michael.Braun@cygnus.com

Visit Our New Web Site

- Industry Reports
- Case Studies
- Industry White Papers
- Fleet Industry Articles
- Industry Links
- Fleet Software ROI Calculator
- Software Vendor Selector
- Online Tour of Dossier

Take a 3 Minute Fleet Survey & Get a FREE Gift

www.arsenault.com

On-Line Program Tour & Tech Resource Center

Dossier

Fleet Maintenance Software
Providing Fleet Solutions Since 1979

Call 800-525-5256



By Frank J. Sonzala, Executive Vice President, Pressure Systems International (PSI)

How do you feel about training and developing your workers?

Is it viewed as a cost or an investment?

Most managers and company executives understand the importance of hiring good people. Not as many realize the benefits of training and developing their workers. Yet, this is essential for a company's evolution and success.

Zig Ziglar, a salesman, author and motivational speaker, stated: "What's worse than training your workers and losing them? Not training them and keeping them."

Worker training and development benefits both the employee as well as the company. Employees who are well-trained become more efficient and productive, and that becomes a competitive advantage.

The challenge is: How do you effectively train and develop employees? Then, how do you keep them motivated?

Four Cornerstones

One day, Tim Musgrave, the president and CEO of PSI, and I were flying home after making calls around the country. Tim was reading the ever-

The employee was well-trained and a key component to the smooth, efficient running of the PSI manufacturing facility, and Mike hated losing him. Mike figured he must have done something wrong to squander the time and effort put forth to make someone this valuable, only to see him leave the company.

That wasn't the case. In fact, Tim patted Mike on the back for a job well done and told him he should be proud that the training he gives his employees make them a "catch" for a company like UPS. Tim told Mike that he should look at himself in the mirror every morning with a new sense of pride, not disappointment.

People Development

This story tells all you need to know to understand the culture at PSI and Tim relates the story often when we have visitors to our plant to explain how a small company in San Antonio, TX, has become the number-one supplier of automatic tire inflations systems around the world.

It is Tim's firm belief that the best thing managers can do each day is to promote their people beyond what they thought they were capable of to make their lives, and the company, better. If, at the end of the day, that means an employee finds their fortune elsewhere, we'll be sorry to see them go, but wish them the best of luck.

Should you ever visit our San Antonio facility, it will become apparent that everyone has bought into Tim's philosophy, understands that everyone matters and everyone is responsible for his or her success or failure.

Resource Maximization

While our company is interested in improving productivity and quality, so, too, are our people. There is the realization that increased productivity will lead to greater job security, higher profits and increased wages.

At PSI, we fully utilize every human resource to their maximum potential. We continuously train them and keep our people motivated. Plus, we work hard to make sure they feel an integral part of our organization.

This is a formula that works.

Frank J. Sonzala is executive vice president of Pressure Systems International (PSI). Based in San Antonio, TX, the company is the number one supplier of automatic tire inflations systems around the world. www.psi-atis.com.

WHAT'S WORSE than training your workers and losing them? Not training them and keeping them.

present airline magazine - the ones that sell everything from dog beds to expensive wrist watches. He came across an advertisement for a company selling motivational items.

That's what we needed, he thought, motivation to keep moving forward. He purchased four motivational/inspiration coins from that magazine with what sayings have become our cornerstones of success at PSI: Never Give Up, Attitude is Everything, Whatever It Takes and Dare to Soar.

Every employee and many of our partners and friends carry a coin depicting these four cornerstones to remind them every day that they can meet whatever challenges they face.

People Development

A couple of years ago, Mike McIver, PSI's vice president of manufacturing, at the company's San Antonio, TX, facility, went to Tim with what he thought was bad news. One of McIver's best employees was leaving to accept a job offer he received from UPS.

Now Available!
Front Aero Covers



Aero Clear Covers installed on a Paper Transport Truck with wide-based, zero offset wheels.



REALWHEELS AERO SERIES

Match your rear Aero Covers with our new front Aero Covers. Covering the front wheel hub and lug nuts helps streamline the front wheels, reducing turbulence and increasing fuel efficiency.

- Fuel cost savings of 1.5% to 3% with rear covers.
- Secure mounting systems are DOT-compliant and easy to install.
- Thru-cover valve extensions available.

NEW!

FORGE AHEAD USA
MADE IN USA

REALWHEELS CORPORATION
RWC

Online Calculator—See What You'll Save!
Go to realwheels.com or call 800-982-1180
© 2012 RealWheels Corporation. All Rights Reserved.

www.vehicleservicepros.com/FMEnquiry and enter 53

MAHA USA Wireless Mobile Column Lifts combine leading technology with unrivaled features and benefits.



User friendly wireless communication

Strong and solid H-Beam column design

Backup safety systems give users an added measure of safety

Model MCL 16-4 B

Unlike hydraulic lifts, MAHA USA's re-circulating ball screw mechanism eliminates the risk of fluid leaks and synchronization problems






LIFTING SYSTEMS JACKS AND LIFTS WHEEL SERVICE EQUIPMENT TESTING TECHNOLOGY

Your Complete Heavy Duty and Automotive Workshop Supplier.
MAHA USA is your one-stop shop, providing the very best in lifting, maintenance and testing technology, guaranteeing the highest in precision and quality. Contact us today to see how we can provide you with all your service equipment needs.

866-624-2872 | www.maha-usa.com
Connect with us, www.facebook.com/mahausa

Maschinenbau Halderwang
MAHA

www.vehicleservicepros.com/FMEnquiry and enter 54

KEEP YOUR BUSINESS IN IT FOR THE LONG HAUL WITH SHELL LUBRICANTS SERVICES.

Protect your business with the proven performance of Shell Lubricants and our wide portfolio of business and maintenance services. Maximizing fleet uptime and minimizing operation costs is key for your success. That's why we work with our customers to deliver the products and services that can adapt to the ever-changing maintenance and lubrication requirements of fleets.

Shell LubeAnalyst helps you monitor your equipment performance

Shell LubeMatch offers recommendations for optimized lubrication

Shell LubeVideoCheck allows assessment of your internal engine condition

Shell LubeExpert provides on-site application support and inspections

Ask your Shell Lubricants Representative for more information on a customized product-and-service recommendation for your equipment. Contact us today at 1-800-231-6950 or visit us online at www.ROTELLA.com.



**THE ENGINE OIL THAT
WORKS AS HARD AS YOU.**



ONE DIAGNOSTIC SOLUTION. ONE EASY DECISION.



JPRO® Diagnostic Station (#23231) with JPRO DLA+ Wireless Adapter

You have a lot of tough choices to make.
Selecting a diagnostic solution shouldn't be one of them!

JPRO® PC-based Fleet Service Kits provide a complete diagnostic solution for today's complex vehicles.

► Over 28,000 Diagnostic Trouble Codes with OEM descriptions

Bumper-to-Bumper Coverage

VEHICLES (Body & Chassis)

Freightliner	Volvo
Sterling	Mack
Western Star	International
Kenworth	Peterbilt
Thomas Built	Bluebird

MEDIUM DUTY (Gas and Diesel)

Ford (2004-2012 E- and F-Series)
Ford (2010-2012 Transit Connect)
GM/Chevy (2002-2011 ½ Ton P/U to 8500 series)
Sprinter (2007-2012)

ENGINES

Cat
Cummins
Detroit Diesel
International
Volvo/Mack
Mercedes

TRANSMISSIONS

Allison
Eaton
Volvo
ZF

ABS & TRAILERS

Bendix
Haldex
Wabash
Wabco



JPRO®

EVERY TRUCK.
EVERY TIME.™



© 2012 Noregon Systems, Inc.



Contact JPRO® Product Sales at:
336-615-8531 | fleetsales@noregon.com
For renewals, call 855-889-JPRO (5776)

www.JPROFleetProducts.com

www.vehicleservicepros.com/FMInquiry and enter 56

