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## SUSTAINED SERVICE

When crisis rears its ugly head, manufacturers step up to deliver the best in customer service.

### TRAFFIC JAM

As supply chain and other challenges persist, the state of transportation remains far from ideal... **page 26**

### SETTING A NEW STANDARD

A new category of heavy-duty engine oils is on its way... **page 30**

### SPEAKER SPOTLIGHT:

#### ALISON LEVINE

5 Tips to Conquer Your Goals... **page 34**

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# COMPOUNDINGS

APR 2022 | V72 | NO 4

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## LETTER FROM THE PRESIDENT

## Happy Together

Welcome to sunny Fort Lauderdale! As a full-time resident of Florida, the Marriott resort here on the Fort Lauderdale beach is one of my favorite locations ILMA has been in recent years. Take time from your busy schedule and enjoy a barefoot walk on the beach with the sound of the surf. Go get your feet wet — the warm Atlantic seawater, the sand between your toes and the connection with the ocean are great ways to take a break in your busy ILMA schedule.



Speaking of connections, this is our third consecutive in-person meeting since the COVID-19 outbreak. In June 2021, ILMA held its first in-person Engage meeting in over a year at the Hyatt Resort in Orlando. ILMA's Annual Meeting, which was held in Phoenix in October, was attended by over 830 lubricants industry professionals. I'm proud that, through the leadership of ILMA's CEO, Holly Alfano, and the entire talented ILMA staff, the Association continues to be the leading organization bringing the industry together for networking, education and legislative initiatives that will benefit all of us.

Most importantly, I'd like to thank all the ILMA members that continue to support the organization. As of this writing, Engage 2022 has over 400 attendees registered for the meeting — above our typical spring meeting attendance. We all realize the value that membership in ILMA and ILMA meetings bring to both the companies we represent and our professional relationships within the industry.

As ILMA president, I cannot be more thankful for the support of the membership through these past two difficult years with the COVID-19 pandemic. I, and the entire ILMA Board, appreciate the strength and resilience of our industry. With that in mind, early this year the ILMA Board formed a Membership Benefit Task Force, chaired by Board member Dave Richards. With the task force's recommendations, the Association will be able to respond to the membership's needs with additional benefits and services. We will create even more value for you and your company as ILMA members. Look for updates on new member benefits in the coming months.

Have a great time and enjoy the meeting here in Fort Lauderdale. Be happy we are all together again!



**Mike Damiani**  
ILMA Board President

# THANK YOU

## MEET ILMA'S 2022 PRESIDENT'S CIRCLE & PARTNERS

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For more information about how your company can achieve President's Circle & Partners status, please contact Holly Alfano, [halfano@ilma.org](mailto:halfano@ilma.org).





## What's New at Engage 2022

**F**rom spring break vacationers to festivalgoers, Fort Lauderdale, Florida, is pulsing with activity as we arrive for ILMA Engage 2022, April 7–9. We're excited to add to the energy with our record meeting attendance and a slate of new items on the agenda.

This year, we're kicking things off with the ILMA Foundation golf tournament on Thursday, April 7. With more than double our usual participation, this shift in the schedule is here to stay! Thank you to all of our golfers for coming out to swing your clubs for a good cause, and to our sponsors for your generous support of the ILMA Foundation.

For the non-golfing set, we're hosting our first in-person speed networking event on Thursday morning. The virtual version at the 2020 Annual Meeting was a huge hit, and the live event is proving just as popular. Slots filled up fast with professionals looking to strike up a conversation with someone new.

Our third debut event is the series of ILMA Express Talks on Saturday morning. We know it can be a challenge to fit everything into your schedule during ILMA meetings — networking, business meetings, golf, education sessions, the list goes on. So, we've created ILMA Express Talks to get you more of the industry information you need in just 20 minutes. Get the latest on Dexos1 Gen 3, gather expert insight on the base oil market and grab some tips on international shipping. Pop into one or maximize your intel with all three!

I hope you'll also find a minute to stop by Base Camp and say hello during the CEO Meet & Greet from 1:30 to 2:30 p.m. on Thursday. Connecting with members and learning about their businesses is one of my favorite parts of ILMA meetings.

At the end of it all, we'll relax and unwind with a beach party on Saturday afternoon, featuring snacks, drinks and a chance to challenge old friends or new connections to a game of bocce ball, cornhole or giant beer pong.

I can't wait to see you there!



**Holly Alfano**  
Chief Executive Officer



# ILMA ENGAGE

Marriott Harbor Beach Resort  
Fort Lauderdale, FL, April 7–9

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- Eligibility to family and friends of ILMA member company employees;
- Scholarships ranging from \$3,000-\$5,000;
- Undergrad and Graduate opportunities;
- Annual renewal based on the maintenance of a 3.0 cumulative GPA.

Qualified applicants will be considered for the ILMA Foundation Scholarship and the Cleves and Taglia Scholarships at the discretion of the ILMA Foundation Board.

Graduate students interested in the Bob Jackson Award must apply separately using that award's application form.

Visit us online at [www.ilma.org](http://www.ilma.org) to apply. Questions? Contact Tim Mack at 703-684-5574 or [tmack@ilma.org](mailto:tmack@ilma.org).

**APPLICATIONS FOR THE 2022-2023  
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### The Bob Jackson Award

For graduate students only, to encourage the pursuit of a degree or career in tribology. A one-time award of \$5,000 (\$4,000 awarded at the beginning of research and \$1,000 awarded after the research report summary is received by the ILMA Foundation), honoring ILMA Past President Bob Jackson for initiating the ILMA Scholarship Program. See application for details.

### The Elmer B. Cleves Scholarship

Elmer B. Cleves excelled both in the classroom and athletic pursuits. He played minor league pro baseball for the Saint Louis Cardinals and in the Canadian League. He also managed minor league professional baseball teams in the U.S. and Canada. After leaving baseball, Elmer worked in chemical engineering and formed his own company, Interlube Corporation, a long-standing ILMA member. Cleves received ILMA's Distinguished Service Award in 2001.

The Elmer B. Cleves Scholarship will be awarded at the discretion of the ILMA Foundation Board to a scholar-athlete who lettered in at least one varsity sport in high school, and who is going on to study science and/or entrepreneurship in college. The scholarship will provide \$5,000 per year with a possible maximum of four years per student.

### The Taglia Scholarship

James A. Taglia is an ILMA Past President, 2004-2005, and served on the ILMA board from 2000 to 2013. Taglia formed ILMA's Industry Task Force, which initiated the Association's signature testing program. He served as the Industry Task Force chair until 2014.

Jim's wife, Mary Anne Taglia, was a founding member of the WILMA (Women of ILMA) Book Club, and a regular ILMA meeting attendee.

The Taglia Scholarship will be awarded to qualified applicants at the discretion of the ILMA Foundation Board. The winner will be an outstanding student, preferably majoring in chemistry, and preferably from the Taglias' home states of Minnesota or Ohio. The scholarship will provide \$2,500 per year.

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# WHAT'S COMING UP

## APRIL

### 2022 ILMA ENGAGE

**APRIL 7-9**

Marriott Harbor Beach Resort,  
Fort Lauderdale, FL

*ILMA, [ilma.org](http://ilma.org)*

### F+L WEEK LIVE

**APRIL 27-29**

Siam Anantara, Bangkok, Thailand

*Fuels & Lubes Asia,*

*[flweek.fuelsandlubes.com](http://flweek.fuelsandlubes.com)*



## MAY

### 76TH STLE ANNUAL MEETING & EXHIBITION

**MAY 15-19**

Walt Disney World Swan & Dolphin,  
Orlando, FL

*Society of Tribologists and Lubrication Engineers, [stle.org](http://stle.org)*

### 2022 SPRING API REFINING AND EQUIPMENT STANDARDS MEETING

**MAY 16-20**

Hyatt Regency Chicago, Chicago, IL  
*American Petroleum Institute (API), [api.org](http://api.org)*

## JUNE

### NLGI 89TH ANNUAL MEETING

**JUNE 12-15**

Westin Harbour Castle,  
Toronto, Canada

*National Lubricating Grease Institute, [nlgi.org](http://nlgi.org)*



### ASTM COMMITTEE D02 PETROLEUM PRODUCTS, LIQUID FUELS AND LUBRICANTS

**JUNE 26-30**

Hyatt Regency Seattle, Seattle, WA

*ASTM International, [astm.org](http://astm.org)*

### ICIS WORLD BASE OILS & LUBRICANTS CONFERENCE

**JUNE 26-28**

De Vere Beaumont Estate, Windsor, UK

*ICIS, [events.icis.com/worldbaseoils](http://events.icis.com/worldbaseoils)*

## JULY

### NORIA RELIABLE PLANT CONFERENCE & EXHIBITION

**JULY 25-28**

Caribe Royale Resort, Orlando, FL  
*Noria Corp., [noria.com](http://noria.com)*

## AUGUST

### PPC FALL MEETING 2022

**AUG. 28-30**

Renaissance Nashville Hotel,  
Nashville, TN

*Petroleum Packaging Council, [ppcouncil.org](http://ppcouncil.org)*

## OCTOBER

### ILMA 2022 ANNUAL MEETING

**OCT. 1-4**

JW Marriott Marco Island Beach Resort,  
Marco Island, FL

*ILMA, [ilma.org](http://ilma.org)*

## NOVEMBER

### 2022 FALL API REFINING AND EQUIPMENT STANDARDS MEETING

**NOV. 14-18**

Hyatt Regency New Orleans,  
New Orleans, LA

*API, [api.org](http://api.org)*



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**Tyler Kuchta, technical services manager**

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## SLICK FACT

### The Lauded Fort Lauderdale

Fort Lauderdale, Florida, is the host city of this year's ILMA Engage. Its history dates back to a Second Seminole War fort built in 1838 on the banks of the New River, when Maj. William Lauderdale led a group of Tennessee Volunteers along the coast to capture Seminole agricultural lands. Three forts were constructed after Lauderdale's success and named after him, but they are no longer standing. In 1911, the city was incorporated as Fort Lauderdale and is now the largest of Broward County's 31 municipalities, with a population exceeding 186,000. The city is often referred to as the "Venice of America," as it boasts 165 miles of scenic inland waterways.

Despite Fort Lauderdale's reputation as a famous beach town and vacation destination, the city offers much more. If you're in town for ILMA Engage, consider extending your trip for a full Fort Lauderdale experience. Here are just a few attractions you could explore:

- The Riverwalk serves as a cornerstone of Fort Lauderdale's arts, science, cultural and historic district and features the Broward Center for the Performing Arts, the Museum of Discovery and Science, the Museum of Art, and Old Fort Lauderdale Village and Museum.

- If you're looking for something a bit more contemporary, Las Olas Boulevard is the city's fashion, fine dining and entertainment center. Stroll the palm tree-lined boulevard, pop in and out of its cool breezeways and rise over the Intracoastal Waterway with views of mansions and yachts.
- Downtown Fort Lauderdale is home to the campuses of Broward College and Florida Atlantic University, and to up the educational allure, here you can find the award-winning Broward County Main Library, an architecturally stunning hub for learning and exploration.



The Riverwalk



# ‘Back Up Your Backups’

## Supply Chain Q&A With Kline Energy Expert

**Oil additive suppliers have not been immune to the global supply chain disruption that has beleaguered virtually all corners of the marketplace.**

Sparked by the COVID-19 pandemic over the past two years, this troublesome concern for lubricant manufacturers won't be solved anytime in the immediate future, said David Tsui, project manager, energy, at Kline & Co., a global research and consulting firm.

In his more than 15 years in the lubricants industry, Tsui has never seen anything remotely resembling the ongoing supply chain woes that have thrown an enormous wrench into the smooth flow of industry operations. His counsel to all: “Back up your backups” as you diversify with urgency.

In the following Q&A, Tsui delves into some of these difficulties and offers more detailed advice on how manufacturers and other companies can navigate today's extremely challenging supply chain terrain.

**Compoundings:** Last spring, in a blog post on Kline & Co.'s website, you stated that “optimized global supply chains are at the greatest risk for bottlenecks should the pandemic shut down key material sources or disrupt shipping lanes and air transport as it is now.” How has that played out over the past year?

**Tsui:** Unfortunately, the pace of these supply chain disruptions has already caused some companies to lose significant portions of their business as they struggle to keep customers supplied. However, businesses across the lubricant supply chain have stepped up their business continuity planning greatly and are more prepared for the next disruption. This will likely help ease the supply issues for lubricant customers going forward, though it is in their best interest to plan for continued disruptions.

**Compoundings:** What role does reducing single-source dependencies play in a company's ability to survive — or even thrive — in this climate?

**Tsui:** It's hugely important to have a lot more diversification. If you can't deliver a customer's order, then that customer starts looking for alternative suppliers. Suppliers have to think in terms of diversifying who furnishes the ingredients that they need.

The market's largest additive suppliers have decades of knowledge and invest heavily in R&D to create complex additive packages. But even the larger suppliers are having problems keeping customers supplied, and those customers are seeking secondary vendors.

To keep their business partners happy — or simply to keep them, period — so many companies are splitting their volume. They are finding they have to give something to keep them around.

**Compoundings:** What should companies do to emerge from this patchwork approach to their supply chain issues?


**Tsui:** The easiest answer: Back up your backups. At the very least, if you are sole-supplied for any particular thing, you need to get a secondary supplier. Keep your options open as far as what you can get and when you can get it.

You hear customers complaining about it all the time — the blenders, they can't get enough additive to keep customers supplied. It's just cascading down the line, so that everyone is buying what they can wherever they can. Companies may even need to consider partnering with their competitors to make it through.

**Compoundings:** What are some advantages that smaller additive companies have over larger suppliers?

**Tsui:** Larger suppliers, in particular, have advanced technology, and they've worked closely with OEMs to improve lubricant technology. That has helped to squeeze every last bit of efficiency out of all this equipment that powers our daily lives and reduces emissions.

The smaller additive companies may lack some of the additive package heritage and OEM ties. However, they are likely more alert to supply chain disruptions as they tend to be more backwardly integrated and could become a viable additive package supplier. As these companies continue to expand their additive package offerings into higher-tier products, they could gain market share in the additive package market.

The latest market trends have been forcing a lot quicker change in an industry that is not typically accustomed to major shifts. 

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An introduction and overview of the topic of sustainability as it relates to the lubricants industry.

**April 26, 2022**

Presenter: **Ed Callahan**



## ***Health & Safety for Lubricant Manufacturers***

Health and safety topics relevant to the lubricants industry.

**July 19, 2022**

Presenter: **Shawn Woll**



## ***Management of Above-Ground and Below-Ground Storage Tanks***

Make sure you're familiar with regulations and best practices.

**September 20, 2022**

Presenter: **Chris Abel**



## ***Planning for the Future: Environmental Considerations When Ownership of a Site Changes***

Examine the environmental considerations and regulations that can come into play when ownership of a site is transferred.

**November 29, 2022**

Presenter: **Kent Johnson**

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**August Mack**  
ENVIRONMENTAL



# In the Know



## STUDY TOUTS RICE BRAN OIL AS GREEN SOLUTION

An alternative to the petroleum-based oils used for cooling and lubricating lathes has emerged from a study published recently in *Biomass Conversion and Biorefinery*, according to a report posted at techxplore.com. The study's lead author, Sneha Edla, said using rice bran oil, when compared with current fluids, provides improved oxidative, corrosive and emulsion stability. Extracted from rice husks, rice bran oil is popular as a cooking oil across Asia, and India is its largest producer. One motivation for the research: Edla cited a link between regular exposure to mineral oil-based cutting fluids and cancer. In addition, mineral cutting oils — frequently a byproduct of refining crude oil — have been linked to skin disorders and other health problems where proper steps are not taken to mitigate worker exposure.



## TOP U.S. OIL CEOS DIFFER ON CRUDE OUTPUT OUTLOOK

Crude output growth is on 2022's horizon, according to the heads of major U.S. oil companies Occidental Petroleum Corp. and ConocoPhillips, though they diverge in their level of bullishness, according to a Reuters story. In late January remarks at the Argus Americas Crude Summit in Houston, ConocoPhillips CEO Ryan Lance predicted that high oil prices "will persist for a while" and that output is likely to surpass November 2019's record of 13 million barrels per day (b/d). However, Occidental CEO Vicki Hollub pegged a more modest level, exceeding 12 million b/d. While output for both 2020 and 2021 was slightly above 11 million b/d, the U.S. Energy Information Administration has forecast an average output of 11.8 million for 2022, then 12.4 million in 2023.



## WHITE PAPER EXAMINES POST-IMO 2020 LUBRICATION LANDSCAPE

Marine lubrication specialist Lubmarine released a white paper, titled *Adapting to Life in the Post IMO 2020 Landscape*, that provides vessel operators with insights into lubricant selection and onboard lubrication management. "The aim of the white paper is to provide operators and engineers with additional insights, advice and guidance, enabling them to truly understand how vital correct lubrication selection and ongoing analysis is in the post-IMO 2020 landscape," said Lubmarine General Manager Arnaud Guichard. To access the white paper, visit [bit.ly/3L4Towe](https://bit.ly/3L4Towe).



## ANT LAB SECURES \$15 MILLION AUTOMOTIVE CERAMIC COATINGS CONTRACT

A major Asian automotive lubricant manufacturer has retained an India-based firm to make ceramic coating and a few hybrid variants. The five-year, \$15 million contract, reported by Autocar Professional, was announced by Advanced Nanotech Lab (Ant Lab). The firm's client was not identified but was described as being in 50 countries and serving the aftermarket and service sectors. Ant Lab's coating products will enhance the appearance of luxury vehicles. Company founder Rohit Rajput said Ant Lab's key developments in mechanical qualities, including stiffness and product bonding strength, were instrumental in securing the pact.

# Market Report

## Global Bearings Market to Expand Rapidly Post Pandemic

By Peter Kusnic

**The COVID-19 pandemic had a major adverse impact on the bearings industry, with a double-digit drop in global demand recorded in 2020, due to a number of factors:**

- The leading global end use markets for bearings — particularly motor vehicles and aerospace equipment — experienced severe declines.
- Severe currency depreciation in some parts of the world also disrupted the bearings supply and demand.
- Both consumers and manufacturers also became more price sensitive during the period of economic turmoil, leading to the greater use of less expensive bearings and a contraction in the global bearings market in value terms.
- As people drove less and industrial enterprises used machinery less intensively, global replacement bearing demand fell and sales of bearing components decreased.
- Though weakness continued in many parts of the world in early 2021, global economic conditions stabilized as the year went on, and manufacturing activity rebounded as nations gained greater control over the pandemic and vaccination rates expanded.

A new Freedonia Group analysis projects global demand for bearings to rise 5.2% per year to \$100 billion in 2025, with all bearing types expected to recover swiftly from 2020 lows. Highlighted below are some of the key trends expected to fuel market growth through 2025.

### **INCREASING DURABLE GOODS MANUFACTURING ACTIVITY, PARTICULARLY OF MOTOR VEHICLES**

Global sales of bearings used in aerospace equipment and motor vehicles are projected to grow at a fast rate through 2025, with automobiles in particular offering strong gains (44% of all new product demand). Both industries struggled in 2020 due to restrictions on travel and halting of production due to the pandemic.

- OEM automotive bearing demand will benefit from rebounds in production of automobiles, trucks, buses and other motor vehicles (e.g., vans), while aftermarket sales will benefit from significant increases in use of motor vehicles by businesses and consumers as COVID-19 restrictions are lifted.
- In aerospace, advances in the construction of drones, satellites and rockets, together with the increasing use of more sophisticated aerospace bearings, will provide the impetus for gains. The continuing return of international travel will also support gains.

However, a semiconductor shortage limited motor vehicle production in 2021 in multiple countries around the world (particularly the U.S.).

### **RISING FOREIGN INVESTMENT IN DEVELOPING MANUFACTURING SECTORS**

As the global bearings market returns to growth in the wake of the COVID-19 pandemic, many of the traditional drivers of market gains — such the rapid development of durable goods industries in the Asia-Pacific region and rising living standards in the Africa-Middle East region — will once again return to the forefront. Though foreign investment is rising in manufacturing sectors in other developing parts of the world as well, trends in Asia-Pacific will continue to have an outsize effect on the global market, as the region is forecast to account for 61% of all new bearing demand between 2020 and 2025.

- Led by China, the region experienced less severe turmoil than many regions, and its recovery is expected to begin at an earlier date because multiple regional countries handled the pandemic effectively.
- Additionally, the region's highly competitive durable goods industries have strong growth prospects, and foreign investment in the manufacturing sectors of regional countries (e.g., India, Thailand) will recover at a particularly swift pace during the post-pandemic period.



- The region also features a developing aerospace equipment industry and is a major supplier of internal combustion engine motorcycles, in addition to e-bikes, which have strong growth prospects through 2025.

#### **R&D FOCUSING ON VALUE-ADDED, APPLICATION-SPECIFIC SOLUTIONS**

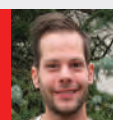
During the COVID-19 pandemic, the bearings industry experienced reduced strategic investment and R&D spending and delayed product rollouts exacerbating 2020 losses. As industrial enterprises ramped up production to meet rebounding demand for a wide range of durable goods in 2021, however, the use of high-performance bearings will also recover.

While bearings are considered a mature technology, important advances continue to be made in product design that improve product performance and extend lifespan. For example:

- Many leading producers are utilizing the Industrial Internet of Things (IIoT) to manufacture so-called “smart bearings,” which can provide predictive maintenance in

aerospace and defense, wind turbine, railway, automotive and other applications with challenging requirements.

- Global production of hybrid and electric vehicles is expected to rise significantly through 2025, resulting in surging demand for bearings that promote electrical grounding.
- Additionally, manufacturers of bearings are increasing their product offering for robotics applications as the use of robots in the automotive, electronic, pharmaceutical and aerospace industries surges. To accomplish the various tasks involved, robotics applications utilize high-precision miniature bearings and thin-section bearings. 🔴



**Kusnic** is a content writer with The Freedonia Group.

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When crisis rears its ugly head, manufacturers step up to deliver the best in customer service

By M. Diane McCormick





suffice it to say, these are strange times in lubricant manufacturing, when supply crises create pressure that threatens to blow by the time it reaches the customer service phase.

“We’re not living in a typical supply chain world for our industry,” said Patrick Murray, director of supply chain and logistics at Lube-Tech, “be it forced to deal with a weather-related material shortage due to a hurricane or other regional issues. These typically amount to a handful of annual supply or logistics issues. But today, some sort of crisis is literally happening every hour on the hour, every day, so we have to be as resourceful and nimble as possible.”

In this pandemic environment, companies already stocked with strong safety valves in the form of effective internal communications and solid external relationships find themselves equipped to adapt and continue delivering customer satisfaction. “If you have good relationships with your suppliers, if you have good relationships with your carriers, if you have good relationships with your customers, there’s no browbeating,” said Eric Stephens, customer service, Interlube Corp. “Everybody understands each other, and that does make everything a lot smoother.”

## Supply Chain

Amid material shortages and logistics tie-ups of 2021 and 2022, Zack Kachkouche, vice president of supply chain, Whitmore Manufacturing LLC, is focusing on procuring raw materials and securing reliable delivery dates. Continuous follow-up and communications with suppliers and freight forwarders enables successful management of these key business priorities. Products are added to the manufacturing schedule once inputs are “physically confirmed via a team member placing their hands on the raw materials.”

“You’re not going to have good customer service if you don’t have products for your customers,” he said. “Where a lot of companies fail, they only focus on their capacity and translate that to shipping dates that they can’t meet, because the chain gets broken before they even get the raw materials.”

In an atmosphere of fluid lead times, team members in procurement and planning are constantly updating their enterprise risk-management system. From there, customer service has the accurate, timely information needed to advise customers and establish realistic expectations. The transparent process gives customers the ability to plan around their options. “It is all about visibility,” Kachkouche said. “The key to success is to have excellent visibility beginning with supply side and through the fulfillment side. If you can connect those dots, with visibility and transparency via strong customer service, you’ll have success.”



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visibility and transparency via strong customer service, you’ll have success.”

**Zack Kachkouche**, Vice President of Supply Chain, Whitmore Manufacturing

Disruptions and extended lead times “have been a challenge for the entire industry,” said Eric Wittine, vice president of sales, Latin America, key account and marketing communications manager, the Elco Corp. “Direct, continuous and consistent communication has been the key to keeping our customers informed. We continue to manage scarcity of raw materials. We review formulations in an effort to make product substitutions and/or qualified raw material changes to provide the product required without sacrificing performance.”

With too few tanker trucks or people to drive them, Stephens has been managing a sharp rise in lost and damaged shipments. Just like delayed shipments, those waylaid supplies can short-circuit scheduling. That’s when Stephens relies on longstanding relationships with his freight-line counterparts. “I know who to go to and the questions to ask,” he said.

On the customer side, similar relationships create a foundation for open, upfront conversations when something goes wrong. In one case, Stephens and his team delivered a product by finding grease tubes from an alternate supplier. “We try not to hide anything or sugarcoat it,” Stephens said. “When we talk to customers, we find out what their actual need is that they can’t live without, and we will try to move heaven and earth to get things done. Our customers know that. They know that anything within our wheelhouse that we can do, we’ll do it.”



## Trust and Relationships

In uncertain times, communicating with customers can provide assurance, but it doesn’t mean shoveling emails out the door. Strategy is demanded.

At Lube-Tech, the supply chain team develops possible solutions and has options on the table for customers prior to contacting them. “I’ve been on a number of calls with

our key customers, going through our own supply chain with them so they can feel comfortable that we have a primary plan in play, as well as secondary and tertiary plans in place to service them at a high level,” Murray said. “Even if it meant it was going to be a delayed plan, they still appreciated having that knowledge so they could communicate internally with their own teams or their distributor networks, allowing them to implement their own contingency plans. We’ve found that good communication is key to maintaining our partner relationships through these challenging times.”

Engaging with customers to make the best decisions possible under difficult circumstances creates fertile ground for ideas that generated new business or plans for strategic, mutually beneficial long-term growth.

Internal communications procedures among all divisions build an unbreakable chain whose last link is a consistent, accurate message delivered to customers. At Wittine’s Elco Corp., planning, supply and customer service teams hold twice-weekly conference calls to review the importance of inbound and outbound materials. Forecasts made through material requirements planning systems are scrutinized and mapped to production schedules. “The relationships we’ve built over the years have enabled us to establish trust and confidence,” Wittine said. “Communications are typically led by sales but percolate throughout the organization as we convey our message to our customers.”

Plus, he added, the daily mantra to assure clear and crisp communications is, “If you are unsure, pick up the phone and call.”

## Price Increases

In pandemic conditions, lubricant manufacturers have been judicious with price increases. At Interlube Corp., those alternate grease tubes were costlier than tubes provided by the regular supplier, but the company absorbed the additional cost — something it will do when a purchase is meant as a temporary patch, said Stephens.

When price increases are necessary, customers understand by now because they face the same pressures. Once again, existing relationships keep the distress to a minimum. “They understand that we treat them fairly and honestly, and we don’t have continuous price increases,” said Stephens. “We’ve been pretty lucky with customers understanding the situation of the global market and moving on until we can improve things in the future.”

Lube-Tech was no exception and experienced multiple supplier pricing changes that impacted its business and how it served its customers. That said, when price increases were necessary, they were delivered with the justification and rationale required under the conditions of service contracts,

and always in “an intelligent way in collaboration with the customer.”

“We didn’t just send out a blanket letter,” said Murray. “It was dozens of personal conversations that were based on the how and the why, or the what and the why of the price change.”

Consistent communications, delivered as far in advance as possible, allow customers to adjust to price increases, said Wittine. “Our biggest concern was maintaining availability of product, and we are proud to say that we were able to avoid sending out any force majeure letters,” he said. “It was and is our goal to find a way to support our customers without fail.”



## Personnel

Lubricants manufacturers agree: Longevity and an “all for one” culture already in place helped sustain customer service personnel during this extended crisis.

“When you have people in the same positions in the same company for a long time, we understand what’s going on within the company, and what’s required,” said Stephens. “We all know what each one of us needs to do, and what each one of us needs to do to help their colleagues.”

At Lube-Tech, daily operational meetings were augmented with a collaborative meeting structure focused on distinct challenges. In those meetings, elements of the organization impacted by urgent supply-chain challenges could “see the pain points” and know that the issue was being addressed, Murray said. The technology team often joined the conversations, suggesting acceptable alternate formulations using materials at hand or easily available. Likewise, there has been significant input from Lube-Tech’s sales and operations teams to help find viable solutions to better serve its customers.

“These are hyper-focused meetings that allow everybody to have a voice,” he said. “The daily meetings are a good way to address the issues in the supply chain that require more than just the supply chain group to solve the problem and maintain service levels to our customers.”

The team, Murray added, “has done a great job at getting resourceful and pulling information together in a short period of time. It’s not like staying in your lane. It’s about helping for the greater good.”

Morale has been a priority for Whitmore, especially in customer service, “because that’s your front line,” said Kachkouche. “These are the people managing customer messaging and day-to-day relationships.”

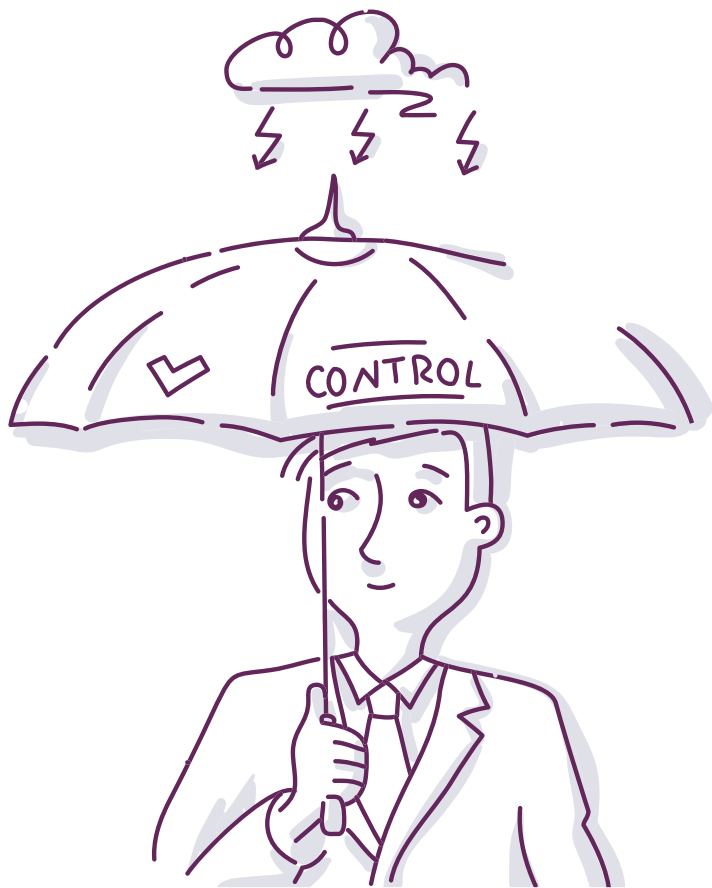
But with the right tools and the right team, “you’re going to be successful. People come to work, they know what’s expected of them, they execute and they communicate.”

With the pandemic-inspired global pilot test in remote work, Kachkouche’s Whitmore adopted a permanent remote-

work policy for the customer service team. “We realize it works,” he said, especially in retaining talent increasingly demanding jobs that offer work-life balance. “Giving people that flexibility allowed us to keep the talent that we have and keep morale high. As challenging as things have been, we’ve maintained our entire customer service team.”

Avoiding personnel burnout during a crisis while maintaining excellence in customer service is a matter of “maintaining a sense of humor and having a solid belief that you will get through, whatever it is,” said Wittine. “Plans and protocols provide the structure, but common sense, flexibility and humor help build successful outcomes.”

When the pandemic first hit and personnel scattered for remote work, Wittine and his team initiated a unique 30-minute call every Friday with one rule of engagement — no business talk. “It encouraged folks to share personal topics of interest at the time, which usually led to moments of jocularity and genuine concern for others,” Wittine said. “At first blush, this may seem sophomoric, but I was aware of individuals who were suffering from isolation anxiety and needed the reassurance that their work-friends are still there for them.”



**“Just as it is critical to do root-cause analysis, so, too, is it important to listen to the customer and seek their thoughts, guidance and recommendations.”**

**Eric Wittine**, Vice President of Sales, Latin America, Key Account and Marketing Communications Manager, the Elco Corp.

## Other Crises

Even in extraordinary times, “typical” crises of the past still loom. Wittine has endured a “perfect storm” of security challenges, political unrest, earthquakes, potentially damaging legal and financial challenges in managing capital equipment warranties, and FDA recalls at an international scale.

As always, relationships come to the rescue. “The successful outcome of those challenges is based on having protocols in place before the crises hit,” Wittine said. “Just as it is critical to do root-cause analysis, so, too, is it important to listen to the customer and seek their thoughts, guidance and recommendations. Time and time again, this has proven to provide a more creative and effective solution.”

No matter the crisis, after-action review makes a company stronger for the next round of challenges, whether predictable, such as a hurricane, or unprecedented, like a pandemic. “Our team executes a robust look-back process to ask, ‘What did we learn?’” said Kachkouche. “How can we handle this differently going forward? Our team is solution-oriented, focusing on scenario analysis to ensure we can answer the question, ‘How do we ensure this doesn’t happen again?’”

All agree that customer service in lubricants manufacturing has taken on new dimensions in the pandemic — dimensions that will drive customer collaborations to new heights of excellence. “It comes down to trust,” said Murray. “We continue to embed ourselves into our customers’ businesses and try to be the go-to company, so when they get into a jam, they can feel comfortable that we’re going to help them come up with solutions. It’s certainly not easy in every situation. We’ve had to make some tough calls, but through continuous process improvement, investing in our company and investing in our people and technology, we’ve become much more nimble, much more resourceful and better able to handle things that come our way.” 🔥

**McCormick** is a Pennsylvania-based freelance writer and a frequent Compoundings contributor.



# TRAFFIC JAM

**As supply chain and other challenges persist, the state of transportation remains far from ideal**

**C**hallenges within the supply chain remain, and manufacturers and transportation providers alike are facing tight capacity, supply chain disruptions and driver and equipment shortages that are making them rethink their logistics strategies.

“We are experiencing a significant increase in transit times, lost shipments and cost across all modes of transportation,” said Ricky Adkins, supply chain logistics senior manager, manufacturing, at Idemitsu Lubricants America Corp.

Before the pandemic, which exposed the delicate balance of transportation networks, the transportation market was relatively stable, meaning everyone could rely on ocean carrier and trucking schedules, said Andrew Bower, director of sales at OEC Liquid Logistics Solutions. However, now there is volatility. “We may, for example, have everything scheduled and the vessel departure date changes with little to no notice, which means each of the other variables above must be changed,” he said. “We are seeing many shipments rebooked three to four times before they are actually executed.”

Adkins said he has seen an increase in the use of air freight due to emergency orders caused by delays in other shipping modes. “Water shipment [costs] have increased significantly and the most of any sector, basically four times,” he said. “This is due to ship capacity and port congestion.”

## **SECURING FREIGHT CAPACITY**

Although U.S. economic activity is beginning to slow, Bob Costello, chief economist and senior vice president of international trade policy and cross-border operations for the American Trucking Associations (ATA), said trucking freight will remain strong throughout the year.

“I am not worried. In fact, I think we’re going to struggle as an industry to haul all of the freight we’ll be asked to haul next year,” he said, adding that capacity will remain strong.

However, large truckload carriers are struggling to expand. Last year, for-hire power units in the truckload sector decreased 5.3%. They increased 3.2% in the less-than-truckload sector. Costello said fleets have been unable to hire

drivers and are selling parked trucks. Additionally, leased-on independent contractors are moving to the spot market.

Sean Hillard, business development manager for BRT Inc., said the transportation industry is still just as volatile as it has been for the past year and half. “It appears capacity, particularly in the tanker industry, is still tight,” he said. “We are starting to see some micro time periods where there seems to be little bit of a loose market for a few days or a week, but the capacity crunch rears its head very quickly in the flurry of load requests we will see from all of our customers after three or four days of calm.”

Many large shippers are circumventing traditional carrier markets and creating their own shipping consortiums or chartering their own vessels, Bower said.

Hillard believes the single biggest change he has seen over the past year is the number of shippers, manufacturers and brokers that are looking to develop long-term dedicated capacity contracts with carriers. “Developing a certain level of dedicated capacity is an important strategy to assure that a manufacturer will be able to deliver their products to their customers,” Hillard said. “Most of these contracts, for us at least, take the form of a truck and driver being assigned a particular customer’s business, that customer sends us the loads that they need, and our dispatch lines up what will fit on the driver within the pickup and delivery windows the customer requires and the hours-of-service rules. We then bill the customer a weekly fee per driver that is running their business.”

The model looks different based on each organization’s individual needs, Hillard said. Some companies might be flexible on inbound and outbound shipments, allowing them to only need dedicated capacity for a small handful of shipments that aren’t flexible. “Another company might have tight time constraints on all their shipments and could require nearly all their capacity to come from a dedicated fleet to keep from shutting down their customer’s facilities,” he explained.

Establishing close relationships with carriers that understand manufacturers’ needs is important in procuring the



By  
**Mindy  
Long**

right amount of dedicated capacity for each organization's specific needs, Hillard said.

However, one of the downsides to this model is that it can take capacity out of the market. "When a truck becomes dedicated to a customer, the next load he picks up might not be the next closest load, but the next closest for the dedicated customer," Hillard explained. "The manufacturers and shippers that develop the relationships and find dedicated capacity sooner than later will end up having an edge over those that waited."

## **FINDING DRIVERS**

The truck driver shortage remains a challenge within the trucking industry, which moves 70% of all the freight tonnage in the U.S. According to ATA, the driver shortage has risen to 80,000, an all-time high for the industry. Based on driver demographic trends — including gender and age and expected freight growth — the shortage could surpass 160,000 in 2030.

"A thing to note about the shortage is that before the pandemic, we were adding drivers to the industry—even though we had a shortage, more people were entering the industry," Costello said. "The issue is that new entrants into the industry didn't keep up with demand for goods."

Increased demand for freight, pandemic-related challenges from early retirements, closed driving schools and departments

of motor vehicles (DMVs), and other pressures are really pushing up demand for drivers. While all sectors in the industry struggle with finding enough drivers, the driver shortage is most acute in the longer-haul for-hire truckload market.

There is no single cause of the driver shortage, but some of the primary factors include a high average age of current drivers, which leads to an increased number of retirements. ATA also reported that women make up only 7% of all drivers, which is well below their representation in the total workforce.

Drivers under 21 are not allowed to haul interstate loads, but a pilot program included in the Infrastructure Investment and Jobs Act could bring 3,000 younger drivers into the industry. "It won't solve the driver shortage, but it will help," Costello said.

Due to the driver shortage, driver wages have increased. Hillard said that while the industry is still feeling a little upward pressure on driver wages, it seems that after the very large wage increases enacted last year, that pressure has calmed down a little. "We feel there is still more to come on the wage front, but for the moment we might have a few seconds to catch our breath," he said.

Much like drivers, equipment has been in short supply. Lead time for a new tractor or trailer continues to lengthen. "You can expect if you put in an order for five tractors, that you will be quoted, at a minimum, one year," Adkins said. "Out of the five, some of them will be pushed out past the

quoted lead time or even cancelled before the shipment date arrives. This creates multiple problems for transportation companies in regard to capacity, growth, equipment replacement and the ability to catch up.”

## RE-THINKING INVENTORY

There are several ways manufacturers can work to get ahead of current supply chain challenges. If possible, companies can keep more inventory on hand to produce their final product, but this is extremely difficult because production materials are also in short supply, Adkins said.

Shippers can also plan for the extended transit times by pulling orders ahead and shipping two to four days ahead of the normal shipping day to allow for the delays in transit. He also suggests manufacturers inform customers of the increased transit times and ask them to place orders sooner.

Bower said production delays often happen due to delays in minor components of a finished product. “Take, for example, additives for finished lubricants. By volume the manufacturer could have domestic, reliable supply for 98% of their finished product, but that 2% is coming from Asia-Pacific and is subject to massive delays,” he said. “I think over time we’ll see some nearshoring, but these days it’s difficult to maintain a completely domestic supply chain. Globalization is here to stay.”

Hillard said the just-in-time model no longer works. “Finding ways to increase storage space and developing more flexible production models will go a long way in assuring that a customer will get their product and make them more attractive to carriers,” he said.

BRT Inc. has had loads cancelled and moved out because inbound raw material never arrived, causing the blend that should have been picked up to not be completed and the carrier’s load to be cancelled. The cancellation has ripple effects, causing more loads to be picked up or delivered late. “Carriers will gravitate towards manufacturers and shippers that have adequate tank space and well structured blend schedules that don’t cause loads to be pushed out and canceled,” Hillard said.

Bower recommends manufacturers secure product availability commitments and communicate that timeline to their logistics partner as far in advance as possible. “If special information is required for pick up (i.e. release numbers from the plant, etc.), that information should be given to your logistics partner ASAP as most truckers will not reserve drivers without all requisite load information,” he said.

Manufactures shouldn’t be afraid to pick up the phone and talk through alternative solutions with their logistics partners, Bower said. “Generally, the most open-minded clients meet with better outcomes for their clients,” he said.

Bower also encouraged manufacturers to have patience with their logistics partners. “Carriers are under-staffed and have seen a major increase in volume without a corresponding increase in resources,” he said. “If you are a BCO [beneficial cargo owner], treat your carriers like you would a valued client.”

## CONNECTING THE LINKS IN THE SUPPLY CHAIN

Several variables must align for a successful international shipment, including the vessel departure date, product availability date, plant loading schedule and trucking availability, and now, the number of variables has increased, Bower explained. “Manufacturers know this as ‘critical path analysis’ based on limiting factors,” he said.

Currently, many hubs and terminals are experiencing major backups and delays. Bower noted that many vessels and shipments from Asia that used to enter the United States via West Coast ports are being rerouted through the Panama Canal to U.S. Gulf Coast and East Coast ports, which is creating unprecedented congestion and delays in Houston and New Orleans.

Apart from the inconvenience the delays cause, there are also financial impacts that change the calculus for shippers, including storage costs until the next vessel arrives, additional trucking, chassis fees, etc.

Bower suggested manufacturers understand the true cost of delays, such as how much market share they lose when their competitor consistently has inventory but they don’t, and the financial impact of halting production for a day or week. “We had a client who directed a lot of time and energy into getting the best freight rates and terms, saving \$100 here or \$200 there. But after two plant shutdowns, they quickly realized a higher freight rate, and thus more carrier options, was cheap by comparison,” he said.

It is critical for manufacturers to communicate the challenges to the end user, Adkins said. “Constant communication and education to the customer has never been more important. While they most likely will not like what you have to say, they are facing the same challenges on the back end, so in reality, they will understand,” he said.

The current market is causing those within the lubricants industry to carefully review their logistic programs, Adkins said. “Unfortunately, until we see some relief in the current market conditions, we don’t have many options for change. I believe that diversification will become key in the future, but I wouldn’t advise price quotes in today’s market if you have rates locked in,” he said. ♦

*Long is a freelance writer and journalist. She can be reached at 480-306-7177 or [mindy@mindylong.com](mailto:mindy@mindylong.com).*





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# Setting a New Standard

A new category of heavy-duty engine oils is on its way

By Robert Bittner



It was only six years ago that the American Petroleum Institute (API) implemented its newest heavy-duty engine oil standards, designed to improve performance for both the latest diesel engines as well as older engines. But a lot can change in six years when it comes to advances in technology, manufacturing and even legislation. To help ensure ongoing peak performance from tomorrow's engines, a new category of heavy-duty engine oil standards is now in development: Proposed Category 12 (PC-12). In addition to delivering overall performance improvement in heavy-duty applications, PC-12 will help to keep service costs, emissions and fuel economy under control, while anticipating future environmental regulations.

### Standard Procedure

The API certifies the quality of heavy-duty oils that meet the standards established through its Engine Oil Licensing and Classification System (EOLCS), a voluntary industry benchmark known as API 1509. The organization's most recent service categories for heavy-duty engine oils — CK-4 and FA-4 — arrived in 2016. According to the API, they were established to deliver “improved shear stability, oxidation resistance and aeration control, as well as protection against catalyst poisoning, particulate filter blocking, engine wear, piston deposits, degradation of low- and high-temperature properties, and soot-related viscosity increase.” CK-4 is backward compatible, suitable for use in older engines. FA-4, designed for the most advanced diesel engines, provides lower emissions and improved fuel economy.

New standards don't come along every day, and the process involves layers of committees, teams and a dizzying array of acronyms and abbreviations. API Senior Manager Jeffrey Harmening explained the process: “Initially, a new



**“The oil industry cannot progress without the input and support of the OEMs. So, it's not that we are dictating oil performance to the OEMs; it's a joint effort, and they are integral participants in the process.”**

***Dennis Bachelder, Senior Engineer, API***

category request, particularly with heavy-duty, will come in from the OEMs or the engine manufacturers. In this case, that was the Engine Manufacturers Association (EMA). Immediately upon receipt, the API activates the diesel-engine oil advisory panel (DEOAP). One of the DEOAP's first orders of business is to assemble a subgroup that consists of the OEMs, the oil marketers and additive companies, and other people with a material interest. They form a new-category evaluation team (NCET). They evaluate the request in depth and then forward a recommendation to the DEOAP as to the merits of the request, with either a recommendation to proceed or to table the request.”

“The NCET addresses the questions: Is a new category needed? What would be the impact of a new category on engines?” added API Senior Engineer Dennis Bachelder. “In other words, do the new engines that are coming out need a new category? What would be the impact on consumers? The industry? Are there tests available for the new category? Answering those questions typically takes about six months. The process is intended to move quickly.”

In this case, it did. The EMA approached the API in March 2021; the evaluation and approval process concluded by the end of the year. The DEOAP then recommended to the API lubricants group, which oversees the API 1509 standard, that it move forward with test development. “The lubes group accepted this request,”

Harmening said, “and ultimately authorized the DEOAP to begin Phase Two of the process, which involves assembling the new-category development team (NCDT), who will go about the difficult tasks of identifying and developing the tests needed to meet the engine manufacturers' request.”

This is the most time-consuming part of the process. “Over the next few years, the NCDT is going to be progressing the request, developing the tests and the precision matrices — base oil interchange, viscosity grade read-across principles — for each of the tests that are needed, setting limits and establishing the specification,” Harmening explained. “The EMA has requested that API initiate first licensing for the new category that will come out of PC-12 by Jan. 1, 2027.”

### A Heavy-Duty Partnership

At every significant point in the process, OEMs and lubricant manufacturers will play an important part in developing PC-12. “Each step along the way, individual equipment manufacturers are represented in person and through the EMA at the meetings,” Bachelder said.

This is essential, he believes, because, “Engine manufacturers understand — better than we do — what their technologies are doing. In part, the oil companies, oil formulators and additive companies rely on input from the OEMs to say what performance is required. The oil industry cannot progress without the input and support of the OEMs. So, it's not that



we are dictating oil performance to the OEMs; it's a joint effort, and they are integral participants in the process."

Because the OEMs are competitors with one another, they cannot spell out exactly what they want for their engines. "But they give us general objectives for what the performance should be," Bachelder said. Generally speaking, engine manufacturers want this new standard to deliver improved wear capabilities, oxidation stability and reduced emissions.

### **On the Road – and Off**

Although the initial OEM request for a new heavy-duty standard was driven primarily by the anticipated needs of on-road vehicles, Harmening noted that off-highway engines also will benefit from this new category.

"Although the EPA requirements for the off-highway group lag behind on-highway engines, the EMA still wants to ensure that new-category oils also meet the needs of those off-highway engines."

"The on-highway trucking industry is very concerned about exhaust emissions and fuel economy, so they look for solutions to those issues," Bachelder added. "One of the solutions is lower-viscosity oils, so I would anticipate that there will be lower-viscosity oils for the PC-12s. That's not a guarantee, but it's certainly one objective. The off-highway people have less of a concern about fuel economy and low-viscosity oils and are more concerned about protecting new equipment that comes on the market while also maintaining backward compatibility. New tractors, new bulldozers have a great deal of technology in them that was not there 30–40 years ago, but older technology is still out there and in service."

Greg Matheson, product manager, commercial engine lubricants, for the Lubrizol Corp., noted that his company's additives are used in heavy-duty



**"Efficiency is crucial, as this equipment is used to complete long hours of operation; every hour that the equipment is not in use costs time and money."**

**Greg Matheson, Product Manager,  
Commercial Engine Lubricants, Lubrizol**

lubricants for a wide range of applications, including construction, agriculture, mining and forestry. "We provide additive technologies to oil marketers that are used to cover both the CK-4 and FA-4 markets. We also continue to manufacture some additive technologies that target legacy API categories of performance used in a more limited aspect for off-highway applications.

"Fuel economy is a huge factor for on-highway fleets, as they are very focused on total cost of ownership," Matheson continued. "Off-highway end users may not view fuel economy savings in the same manner." But, of course, any savings they may see will contribute toward the overall efficiency of their equipment.

"Off-highway end users want to ensure they can keep their equipment properly serviced to stay within their

equipment warranties," he added.

"Efficiency is crucial, as this equipment is used to complete long hours of operation; every hour that the equipment is not in use costs time and money."

For Lubrizol's heavy-duty customers, durability is a key requirement, whether those customers are servicing on-road or off-road vehicles and machinery. Matheson pointed out that newer engines in off-highway applications are now equipped with selective catalytic reduction (SCR) and diesel particulate filters (DPFs), helping to reduce emissions through lower sulfated ash, phosphorus and sulfur (SAPS) content — and doing so without compromising durability. Yet SCR and DPFs and a variety of other technologies add extra maintenance considerations for owner-operators and fleets — considerations that a new heavy-duty standard

should address. “All of these performance areas are important contributors toward long engine life,” he said.

## Heavy-Duty Benefits

As the industry enters into years of testing and trials for PC-12, much remains unknown about exactly what the new standard will be able to deliver for heavy-duty diesel engines. However, the API believes that, in addition to accommodating anticipated regulatory requirements and extending useful life and warranty periods, potential benefits could include:

- Supporting new engine technologies with higher brake mean effective pressure (BMEP).
- Improving fuel economy for certain engine models.

- Supporting new elastomers for modern engines.
- Enhancing engine durability, thereby reducing cost of ownership.
- Improving environmental benefits, including reduced SAPS.
- Increasing oil-drain intervals.

It is expected that PC-12 will include both a C subcategory, which will maintain backward compatibility, and a new F subcategory, which will replace FA-4.

“The call for a new category was due to anticipated advancements in engine technology in the North American market,” Matheson summed up, noting that Lubrizol, like many of its lubricant manufacturing colleagues,

has been actively involved in the industry discussions and planning surrounding PC-12 and is hopeful about the new benchmarks the new standard will set. “We will continue to work with all stakeholders to assess the performance needs and value that PC-12 can bring to the market.”

*Bittner is a Michigan-based freelance journalist and a frequent Compounding contributor.*

**Editor's note: Just prior to press time, the EPA proposed new, more stringent standards related to heavy-duty vehicles, starting with model year 2027. The proposal aims to reduce nitrogen oxide emissions from these vehicles by as much as 60% by 2045. For more information on the proposed rule, visit [bit.ly/3Kukono](https://bit.ly/3Kukono).**



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## Speaker Spotlight: Alison Levine

# 5 Tips to Conquer Your Goals

*By Alison Levine*

**T**he COVID-19 pandemic shook the world like it's never been shaken. And yes, it seems like we are finally seeing the light at the end of the tunnel, but the reality is that we have absolutely no idea what the rest of the year is going to look like. (Hell, we don't even know what tomorrow is going to look like.) The good news is that we don't have to know what the future is going to look like in order to make huge strides toward our goals, so here are five things to focus on that will help you climb whatever mountains lie ahead.

### **1. You Can Be Scared and Brave at the Same Time**

Crossing the Khumbu Icefall on Mount Everest is hands down the scariest thing I have ever done. You have to make your way through 2,000 vertical feet of these massive ice blocks that could fall on you and kill you at any moment. You have to cross crevasses on rickety aluminum ladders where you could fall hundreds of feet to your death. But you cannot let fear paralyze you. You keep moving, regardless of the fear.

### **2. Learn to Redefine Progress**

Ever feel like you are moving in the wrong direction? Well, you feel like this a lot on Mount Everest because you spend a lot of time climbing down the mountain as you acclimatize. During the first six weeks of the expedition, you spend a lot of time climbing up to higher camps and then going all the way back down to base camp to rest for a few days before you can go up the mountain again and go even higher — you have to do this in order to get your body used to the altitude. And while you are definitely climbing in the opposite direction from the summit, you are still making progress because you are building strength and are helping your body acclimatize. Progress can happen in a lot of different directions.

### **3. Do Not Underestimate the Power of a Positive Mindset**

Attitude can make you (and your team) or break you when the you-know-what hits the fan, and optimism can bring hope when people feel lost in a dark or chaotic situation.





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Research shows that positive thinking is good for your health and can actually increase your life expectancy, reduce stress and boost your immune system. One of my expedition leaders once told me that there were days where he thought I was the strongest person on the team because of my unwavering enthusiasm, positive attitude and sense of

humor. He explained that these things lifted the team up during the toughest of times when things felt bleak. You know that saying “Enthusiasm is contagious”? Well, it’s true, and there is science to back this up.

### 4. You Don’t Have to Be the Best, Fastest, Strongest Person Out There Every Day

I used to stress out about not being the fastest, strongest climber on an expedition. But what I learned is that it’s not always the fastest and strongest climber who gets to the top of the mountain — rather, it is the climber who is willing to withstand discomfort and who is absolutely relentless about putting one foot in front of the other. If you try to be the fastest and the strongest 100% of the time, you are going to burn out. Pace yourself, and then just keep moving. You don’t have to know what’s ahead; you just have to be the person who won’t quit.

### 5. Do Not Ever Be Afraid to Fail

If you are afraid to fail, you will always be afraid to take big risks. And a lack of failure-tolerance stifles progress and innovation. Remember that failure is simply one thing that happens to you at one point in time. It does not and will not define you.

*Levine is a mountain climber, sportswoman, explorer and leadership consultant. Don’t miss her keynote address at ILMA Engage, Friday, April 8, 9:15 –10:30 a.m.*

# Employee Poaching: Avoiding Loss of Trade Secrets

By Phillip M. Perry

**M**ost employers fear the loss of valuable business secrets when staff members leave for competing organizations. Protecting confidential data has become more important with recent changes in the work environment. Not only is the employment relationship unstable, but top talent is in demand. Intellectual property — easily carried between companies — is more valuable than ever. At risk are customer lists, pricing data, business plans and proprietary marketing strategies.

The risk of data loss has become much greater as recruiting has become more aggressive. Companies that poach “A players” from their competitors are subject to their own top performers being lured away.

Luckily, powerful tools in the form of restrictive covenants can protect company secrets. On the one hand, these written agreements keep departing employees from working for competitors, soliciting the same customers or using a former employer’s sensitive information. On the other hand, companies poaching employees from competitors must avoid violating those firms’ restrictive covenants.

“Most employers have confidential, proprietary or sensitive information to protect,” said Joon Hwang, shareholder in the Tysons Corner, Virginia, office of Littler Mendelson P.C., the nation’s largest law firm defending employers in labor and employment disputes. “Or they may have certain employees with desirable skills, experience, training or



intimate knowledge considered integral and invaluable to their businesses.

Restrictive covenants, drafted properly, can be a powerful tool for protecting all of this valuable information.”

## KEEPING SECRETS

Attorneys suggest considering the following restrictive covenants, listed in descending order of severity.

### Noncompetes

Covenants not to compete specify a period of time during which an employee will not accept employment at a competitor for a specified geographic region. They usually also prohibit the individual from serving as an independent contractor for, or

having any ownership interest in, a competing organization.

“I generally counsel my clients to have noncompetes, certainly with their higher-level employees,” said Jeffrey A. Dretler, a partner at Rubin and Rudman in Boston. “I think it’s a very important and effective tool for protecting company confidential information and relationships in which they have invested.”

Dretler cautions that courts may deem noncompetes invalid if they fail to balance the interests of employers with the needs of the employees to make a living. (Editor’s note: The Biden administration has recently moved to restrict noncompete agreements.)

### Nonsolicits

Some employers avoid the risk of invalidated noncompetes by using less restrictive covenants often referred to as “nonsolicits.” These are agreements to not solicit the employer’s customers for a set period of time.

“A nonsolicit is often easier to defend than a noncompete,” said Joseph Y. Ahmad, a founding partner in the Houston law firm of Ahmad, Zavitsanos, Anaipakos, Alavi & Mensing. “That’s because it is narrower in scope, allowing the employee to work for a competitor.”

Again, though, employers must avoid overreach. The agreements should specify a reasonable time frame and limit their scope only to those specific customers that were served by the employee.

### Anti-Raiding Provisions

Restrictive covenants can also be designed to keep departing employees from luring co-workers to a new employer. “I don’t know of anything that triggers litigation more than a high-level employee leaving a company, and then being suspected of operating as a Pied Piper and causing a bunch of other employees to leave,” said Ahmad. “Many times, that gets articulated as some type of raiding claim.”

### Confidentiality Agreements

As the comments so far suggest, sometimes the old adage “less is more” can be a smart business posture; employers may benefit more from less-restrictive covenants. Just as a nonsolicit may be more effective than a noncompete, so can the less onerous confidentiality

agreement be in some circumstances the most useful tool of all.

“A confidentiality or nondisclosure provision prevents departing employees from disclosing or using proprietary or confidential information of their ex-employers, or that of their employers’ customers,” said Hwang.

After defining the nature of the organization’s sensitive information, the agreements state that the signers will take measures to keep it secret, he added. “The information in dispute does not have to be a ‘trade secret’ but must simply be confidential, proprietary or not publicly available.”

The good news is that confidentiality agreements are usually highly defensible in court, because every state’s legal system recognizes the right of businesses to protect their private information. Attorneys advise they be signed by any employee who has access to sensitive business data. Such documentation provides evidence that an employer has taken steps to communicate the importance of discretion to employees.

### LURING STAR PERFORMERS

Now for the other side of the coin. Employers poaching a valuable worker must avoid violating a competitor’s restrictive covenants. The legal fees and time required to defend one’s actions can be costly, even when a court strikes down the first employer’s covenants as unreasonable.

“Some employers draft restrictive covenants knowing they will not be enforceable but will scare people

into behaving as desired,” warned Ben Mathis, an Atlanta attorney and managing partner of the nationwide law firm of Freeman Mathis & Gary. “Employers with deep pockets can cause a lot of trouble.”

Attorneys advise taking some prudent precautions during the hiring process. Ask what agreements the employee has signed with the current employer. The individual who never signed a noncompete might have signed an agreement not to solicit certain customers or to recruit co-workers. Ensure the individual is not taking confidential information.

### CHANGING LAWS

Noncompetes, nonsolicits and confidentiality agreements form a three-legged stool of defense for employers looking to protect valuable business information. But such restrictive covenants must be carefully written to conform to state laws.

“The viability and enforceability of a company’s restrictive covenants, particularly noncompetes, are more likely to be the subject of rigorous review today than in the past,” said Hwang. “To ensure enforceability when it counts, employers should review the scope and terms of such documents to ensure they are sufficiently and narrowly defined to meet their legitimate business interests.” 🔥



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# Getting Ready for EVs

By Jeff Leiter

In February's *Compoundings*, my colleague Matthew Levetown wrote about the Environmental Protection Agency's (EPA) increasingly stringent greenhouse gas tailpipe standards that were promulgated at the end of last December for model year 2023–2026 cars and light-duty vehicles. Over the next four years, the EPA estimates that 17% of new cars being sold will be battery-powered, eliminating demand for some 361 billion gallons of fuel over their useful lives.

The EPA's final tailpipe emissions rule is being challenged in court by numerous groups and 15 states, in part based on the "major questions doctrine," which holds that courts should not defer to agencies on questions of "vast economic or political significance" unless Congress has provided explicit authority to the agencies. As you recall, in January, the U.S. Supreme Court used this doctrine to block the Biden administration's emergency temporary standard, which required employees of large companies either to be vaccinated against COVID-19 or to mask and undergo weekly testing. The argument here is that Congress did not give the agency specific authority under the Clean Air Act to mandate electric vehicles (EVs) to address tailpipe emissions from internal combustion engine vehicles (ICEs).

The problem is that, even if the petitioners are successful in overturning the EPA's tailpipe rule in court, the reality is that the automobile industry is moving forward with EV-focused platforms. OEMs have committed billions of dollars of investments in battery development and production. Battery-powered vehicles, as evidenced by this year's Super Bowl commercials,

are here to stay, and the transition to more and more EVs on the road likely will not be reversed.

I have talked with several ILMA members about how they see the future of the lubricants industry with the rapidly expanding EV market. All of them are bullish about the opportunities for their companies as they continue to assess the impact of EVs on U.S. manufacturing (their customers) and the broader supply chain. Here are some key takeaways.

My conversations took place against the backdrop of some significant recent developments in addition to the EPA's tailpipe emissions rule. The Biden administration has begun its rollout of \$5 billion in funding to states from last year's infrastructure law to increase the installation of EV charging stations across the U.S. In February, an Australian company announced plans to build a factory near Nashville, Tennessee, to manufacture an expected 30,000 rapid EV charging stations. The new factory will create about 500 new jobs, as well as opportunities for purchases of lubricants for the plant's machines. Other similar factories are expected to spring up in other portions of the country.

Before moving away from the new infrastructure law, that will increase funding for building and repairing the nation's roads, bridges, tunnels, airports and ports. These projects historically have created substantial demand for lubricant products.

One ILMA member pointed out that the new infrastructure law also allocates funding for alternative-fueled vehicles, including the development of hydrogen fueling infrastructure instead of, or in parallel to, EV

infrastructure. Some vehicle manufacturers are looking to expand into the hydrogen market, even though hydrogen is not carbon neutral and requires many of the same components of the internal combustion engine. This may be a tempting alternative for some OEMs that are not ready to totally abandon the internal combustion engine for EVs.

It has been an interesting case study of how OEMs are addressing the challenges of increasing their production of EVs, including the technology needed for building the cars. Because EVs are increasingly reliant on innovative computer technologies, vehicle manufacturers are being forced to rethink, rework and modernize their factories. This retooling presents opportunities for ILMA members to work with customers on a range of lubricants and fluids.

ILMA is funding a study on how the change to EVs will affect the broader supply chain, as EVs require different and fewer parts (e.g., exhaust systems, mufflers, catalytic converters, tailpipes, spark plugs, fuel tanks and radiators) than ICEs.

EVs require lubricants. As EVs replace ICEs, independent lubricant manufacturers will be faced with revising relationships within their supply chains. At the same time, the transition will create opportunities with new customers as businesses begin developing new products for EVs.

While being somewhat coy for competitive reasons, one member said his company is working with another company producing cables for EV charging stations to address problems with the cables overheating. Along with the influx of public funding and

incentives, there will be continued competition in the private sector for companies to capture portions of the market for alternatives to ICEs and evolving EV technology. These alternatives and advances are opportunities for independent lubricant manufacturers.

ILMA members also pointed out international opportunities. More than 20 countries, provinces and states globally, mostly in Europe and North America, have proposed to phase out new sales of ICEs or to only sell EVs in the 2025–2050 time frame. These

ambitious targets provide a clear signal to supply chains, including independent lubricant manufacturers.

Interestingly, several ILMA members are examining the challenges and opportunities of EVs from a labor perspective. They see their employees as their greatest asset, and the growth of the EV market will affect their employees and their employees' families. Members mentioned the development of communication strategies to keep employees updated and engaged to find an advantage in the marketplace as the number of EVs on the roads grows.

The Association will continue to be a resource for members. ILMA's research study on the effects of vehicle electrification on the lubricants industry will be a significant tool for members as they develop their strategies to address the coming market changes from EVs. It is important not to be "shocked."



**Leiter** serves as general counsel to ILMA, representing the Association since 1981.

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# State Legislatures Push Back on Sustainable Investment Strategies

By Matthew Levetown

**M**ore and more businesses are implementing or facing calls for environmental, social and governance (ESG) reporting, either by consumers, governments or financiers. In response, some state lawmakers have introduced bills opposing such efforts, including by disallowing state pensions to invest in companies requesting or implementing ESG reporting.

While Texas is the only state to have actually passed a law, a number of other states, including Oklahoma and West Virginia, have introduced similar language that would result in cutting ties with insurance, banks and finance entities that create ESG investment plans. Despite the global trend moving toward ESG, sponsors of these state bills suggest that investment decisions should only be based on likely returns on investment, setting the stage for a battle between legislatures and market forces.

In many ways, the state bills are no surprise — North Dakota, for instance, makes over 50% of its tax revenue from oil production. Any decreased investment because of ESG objectives or explicit divestiture from fossil fuel exploration would seriously impact state coffers. Texas, the first state to pass its anti-ESG bill into law, required pension funds and state and local governments to divest from any company that moves away from fossil fuels through boycotts or divestment. This resulted in a call by Texas Lt. Gov.

Dan Patrick for the state to boycott BlackRock Inc., the world's largest asset manager, which West Virginia recently mirrored.

The problem, from the standpoint of financial entities, is that the purpose of ESG is not to harm fossil fuel investment but to recognize the risks associated with climate change and governmental actions to decarbonize the country. For example, backers of West Virginia's bill introduced the text with specific comments against entities that divest from coal assets, despite the fact that coal mining and energy assets have underperformed on market indices for years. This is due, in part, to the federal government's efforts to restrict state carbon emissions linked to energy

production. After all, even with more entities pledging strong ESG programs, there has not been significant divestment from fossil fuel assets, as there is no switch.

## SHORT VERSUS LONG TERM

Critics point to the short-term outlook of these state laws, focusing on annual or short-term gains over longer-term benefits of investment. While this seems to be justifiable on the face — more money now could mean more in the future to implement new policies to combat climate change — it ignores the impacts of disruptions and disasters, along with the benefits of increased innovation in developing new technology. Financial firms implementing ESG policies point out





that inconsistent government regulation, coupled with climate and social governance risks, introduce instability in markets that they need to be able to account for when advising clients.

Of particular concern is the impact of anti-ESG state bills on insurance companies. Some of the laws, if passed, effectively dictate through government boycott what things an insurance company can analyze to determine risk. Insurance, while as concerned with short-term returns as any business, derives its business through longer-term spreading of risks. While potentially offering a breath of relief by reducing administrative burdens to obtain insurance, it could also impact businesses along coasts or major waterways facing

increased risks of flooding or hurricanes. Insurance companies could be faced with situations where they would prefer to drop risky policies in disaster-prone regions, or else face their own business risks unless they raise premiums (without being specifically due to climate change). A big strike to an insurance company could cause it to fold entirely, leaving the formerly insured to tread water.

#### LOOKING AHEAD

The passage of anti-ESG bills is unlikely to result in significant changes to any major financial firm's ESG policies, especially as other states introduce legislation on the opposite side of the ledger by requiring divestment away from fossil fuels. The Global Fossil Fuel

Divestment Commitments Database estimates the total value of international assets subject to greenhouse gas emissions policies at nearly \$40 trillion — assets in which some states will now no longer be able to invest. There are two likely results, absent a federal ESG policy mandate: the creation of a partisan division in investing and banking strategies, and the implementation of a challenging patchwork of regulations for entities analyzing climate change associated risks. 🔴



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# Member Connections

## AXEL APPOINTS NEW NORTH AMERICA PRIVATE-LABEL SALES MANAGER

Axel appointed Serdar Firkan as its new North America private-label sales manager.



Serdar Firkan

Firkan, who started with Axel in January 2016, brings 28 years of lubricants and oil and gas multinational experience to this position.

“We are very happy to have Serdar as part of the Axel team,” President Tom Schroeder said in a company news release. “Congratulate him on this important new appointment, and wish him the best.”

## INFINEUM RESTRUCTURES EXECUTIVE COMMITTEE



Infineum is restructuring its executive committee by adding new sustainability, business growth and IT directors.

Maurizio Abbondanza now serves as sustainability director and is responsible for coordination, design and integration of the company’s sustainability strategy.

Kim Shee-Young now serves as director of business growth and is

responsible for leading the company’s growth agenda.

Felicia Tan now serves as global IT director and is responsible for formulating IT strategies and driving digitalization.

## BASF APPOINTS NEW SENIOR VICE PRESIDENT TO LEAD FUEL AND LUBRICANT SOLUTIONS

BASF appointed Lena Adam as its new senior vice president of the company’s fuel and lubricant solutions arm, replacing Uta Holzenkamp, who was recently appointed as BASF’s new president of its coatings division.

Adam has held various positions at BASF in her 15 years at the company, most recently serving as vice president of global strategic marketing fungicides, agricultural solutions.

“The fuel and lubricant solutions business has been a true success story for years,” said Adam, “and I am eager to continue writing this story together with the team, our partners, and our customers.”



Lena Adam

## PILOT CHEMICAL RELEASES SUSTAINABILITY STRATEGY AND REPORT

Pilot Chemical Corp. unveiled its sustainability strategy and released its first sustainability report, setting the company’s path forward, according to a company news release.

The Pilot 2021 Sustainability Report outlines the work the company completed during the past two years. Pilot will measure its progress on 11 new sustainability goals.



Pilot’s sustainability strategy will continue to drive the company’s progress moving forward.

“This work represents a major milestone in the company’s history,” said Pilot CEO Mike Clark. “I know that our team members and all of our stakeholders are excited about the journey ahead of us.”

To view the report, visit [pilotchemical.com/about/our-sustainability-commitment](http://pilotchemical.com/about/our-sustainability-commitment).

### SEA-LAND CHEMICAL EXPANDS BUSINESS DEVELOPMENT, APPOINTS VICE PRESIDENT

Sea-Land Chemical Co. promoted Mauricio Galvez to vice president of business development, formalizing the increased role that business develop-



Mauricio Galvez

ment is taking within the company, according to a news release.

Galvez is now responsible for leading the expansion of Sea-Land’s supplier and customer network in the U.S., Canada, Mexico and Latin America.

“I am thrilled to announce Mauricio Galvez is taking a larger role as he expands Sea-Land’s business development efforts,” said Sea-Land President and CEO Jennifer Altstadt. “He’s been an invaluable part of the Sea-Land sales team and a key contributor in establishing and executing our growth strategy.”

To submit Member Connections items for future issues of *Compoundings*, contact Senior Managing Editor Sam Hoffmeister at [samuel.hoffmeister@theYGSgroup.com](mailto:samuel.hoffmeister@theYGSgroup.com)

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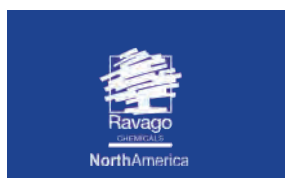


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### Dover Chemicals Corporation and Ravago Chemicals North America Announce New National Distribution Agreement

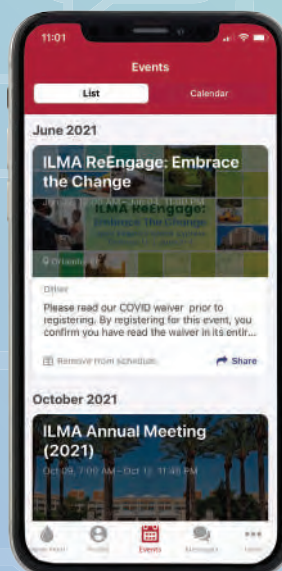
Dover is a leading chemical additive manufacturer for the metalworking & lubricant, coatings, plastics, and oil field industries. Starting February 2nd, 2022, Ravago Chemicals will become the national distributor of Dover Chemical products. This is an expansion of a long-standing relationship between the two companies that began in 2003 in the Midwest region.

For more info about this press release, go to <https://na.ravagochemicals.com/>

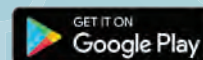
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# Cross Connections

## API Prepared for Active Year of Standards Development

By Jeffrey Harmening

**A**s we start the second quarter of 2022, there is a great deal happening with the engine oil industry. As anticipated, the biggest news is the development of API PC-12 oils for diesel engines. The groundwork was put in place last year when we updated some of the key systems employed by API, which benefit oil marketers, vehicle manufacturers and shops and ensure consumers that the highest-quality motor oil is being poured into their engines.

These key systems include the following:

- **API 1509** — *Engine Oil Licensing and Certification System* contains the latest standards and marketing guidelines for API engine oil quality marks and governs how engine oil marketers certify that gasoline and diesel engine oils meet API's stringent performance standards.
- **API 1525** — *Bulk Oil Testing, Handling, and Storage Guidelines* provide recommended equipment and procedures for the proper handling of incoming and outgoing shipments of lubricants to prevent contamination and spillage plus protect product quality. The guidelines cover finished lubricants in bulk, drum or pail.
- **API 1525A** — *Bulk Engine Oil Chain of Custody and Quality Documentation* provides procedures for managing the bulk engine oil chain of custody to ensure oil quality from the point of manufacture to installation in a consumer's engine. Updates were made due to modernization of processes in the supply chain and to harmonize the standard with the current edition of NIST Handbook 130. API 1525A also forms the basis for Motor Oil Matters (MOM), API's program for licensing the engine oil supply chain, which provides benefits for distributors, installers and their customers.

### NEW ENGINE OIL SPECIFICATIONS

Updating all of these systems will help API to provide leadership as we work with the industry to be prepared to meet the demands for specifications for gas and diesel engine oils. The new diesel engine oil specification process referred to as PC-12 began last year following a request from

the Engine Manufacturers Association (EMA) that a new category be developed to meet the needs of future engines. Following the request, the Diesel Engine Oil Advisory Panel (DEOAP) established a New Category Evaluation Team (NCET) to consider the request.

In December, the NCET recommended that API move forward with the development of PC-12. The API Lubricants Standards Group voted to accept that recommendation, and the new Category Development Team (NCDT) was immediately assembled, officially kicking off the test development phase of PC-12.

The NCDT manages the development of new API diesel engine oil service categories. This includes working with all industry stakeholders and interested parties to identify or develop engine tests that will meet the needs of increased performance and enable engine manufacturers to meet the changing NOx emission standards expected in 2027 and requirements for fuel economy for certain engine models.

The proposed new category is being requested with the following improvements:

- Increased oxidation performance.
- New wear test capability.
- Addition of lower oil viscosities to include xW-20 in the F subcategory.
- Improved after-treatment capability.
- Expansion of engine elastomer compatibility.

With engine technology changing, several engine tests used to evaluate engine oils are expected to become obsolete due to diminishing engine hardware supplies. Several replacement engine tests will need to be developed.

The current C subcategory will maintain its backward compatibility.

The new F subcategory is intended to replace FA-4 and does not need to retain backward compatibility.

The request for the first licensing date from API is no later than Jan. 1, 2027. This corresponds with the anticipated

# ADVERTISERS INDEX

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Chevron Oronite	<b>9</b>	Robert Connel	925-842-0213	<a href="mailto:rconnel@chevron.com">rconnel@chevron.com</a>
Dover Chemical Corporation	<b>21</b>	Louis E. Bona	267-252-1044	<a href="mailto:lou.bona@doverchem.com">lou.bona@doverchem.com</a>
Ergon, Inc.	<b>11</b>	Kathy Potts	601-933-3148	<a href="mailto:kathy.potts@ergon.com">kathy.potts@ergon.com</a>
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STLE	<b>20</b>	Rachel Fowler	847-993-7959	<a href="mailto:rfowler@stle.org">rfowler@stle.org</a>
Vanderbilt Chemicals, LLC	<b>35</b>	Kevin Delaney	203-853-1400	<a href="mailto:petro@vanderbiltchemicals.com">petro@vanderbiltchemicals.com</a>

2027 implementation date for U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) heavy-duty on-highway regulations. However, a one-year mandatory waiting period will precede the first licensing date, as in each new category before. Ultimately, this means the NCDT must have the category prepared and adopted into API 1509 by Jan. 1, 2026.

In addition, the API has a request for additional tests related to low-speed pre-ignition in gasoline-powered engines that is currently being evaluated. Success here could result in an API additional classification of “SP PLUS” and would

likely be included in the next gasoline engine oil specification, much in the same way that SN PLUS preceded API SP.

As you can see, 2022 will be a busy year for the industry, and API will continue to be a supportive partner.

If you have questions or need additional information, contact the API Engine Oil Licensing and Certification System at [eolcs@api.org](mailto:eolcs@api.org).



**Harmening** is manager, EOLCS/DEF/MOM, at API.

# Cross Connections

## STLE Education Engages the Lubricants Technical Community

By Ed Salek

**C**hallenges continue in 2022 for the lubricants industry: environmental and regulatory issues, cybersecurity, sustainability, raw material price increases and supply chain disruptions. Face-to-face meetings like ILMA Engage are an ideal forum for business leaders to learn about and craft a company strategy for dealing with these and other concerns.

Skilled and well-informed technical people play a crucial role in executing those strategies, which is why the Society of Tribologists and Lubrication Engineers (STLE) maintains a robust and convenient digital education program. Webinars and other online education options are at the heart of STLE's goal of being recognized as the go-to resource for knowledge in lubrication and tribology as well as world-class certification.

During the past two years, there have been nearly 1,000 views of STLE webinars and online courses in both live and recorded formats. Recently, we looked back at the webinar topics that were of greatest interest to the lubricant community. This webinar top-10 list divides into three distinct categories and could serve as a guide for ILMA members looking to expand or enhance technical knowledge.

Category one comprises new technology and includes a webinar titled "Next Generation Driveline Lubricants for Hybrid and Electric Vehicles." It focuses on the future modifications that will be needed in lubricant technology, because driveline architectures for hybrid and electric vehicles (EVs) are significantly different from conventional manual or automatic transmissions and axles. Perhaps not surprisingly, it was the most popular offering.

Another webinar covering a related topic also scored well when presented in early 2022. "Test Methods for Evaluation of Electric Vehicles" discussed some of the current established test methods for evaluating EV lubricants and coolants and assessing their ability to perform in the unique environment. This program also included discussions

on evaluation methods that will need to be developed or modified to enable the industry to properly formulate and evaluate fluids for EV applications.

Webinars covering basic technical information comprise the second-highest interest category. There are five programs in this group. One of the most popular is a pair of recordings that dealt with the storage and handling of lubricants and greases. Other webinars that scored well were one on anti-wear additives and friction modifiers and one on gear failure analysis.

Category three explores the important market segment of metalworking fluids. It includes a program on condition monitoring that discusses some of the critical tests that need to be run to evaluate the condition of a metalworking fluid over time. Another well-received program was "Trouble-shooting Metalworking Fluid (MWF) Field Problems." It offers guidance on dealing with issues related primarily to operational variables, including surface finish, part tolerance, tool life, mist formation and cost per part.

All these popular webinars and others are available to STLE members (\$39 per webinar) and nonmembers (\$59) through the STLE website, [stle.org](http://stle.org). Most are one hour in length and feature STLE member experts speaking on the topic area.

The next live webinar in the 2022 series will be on June 8 and is titled "The Tribology of Piston Rings." It's estimated that more than 35% of all engine friction comes from the interface of the piston ring against the cylinder wall. Research into the tribology of that interface points to an opportunity for improved engine efficiency. The presenter will be STLE member Lake Speed, a retired NASCAR driver. Speed is still involved in race car technology. 🔥



**Salek** is executive director of STLE.





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Paterson and his sons visit St. Andrews Links.

## Craig Paterson

Vice President – Industrial,  
The Lubrizol Corp.



“Having the character trait of being hardworking rings true and has paid dividends over my life and career.”

### THE HOME OF GOLF

“I am truly passionate about golf and its history. I was born near St. Andrews in Scotland and played there as a boy. So, when I travel home to see family, visiting St. Andrews — even to walk around the old town to experience its history and atmosphere — is first thing on my to-do list.”

### FROM BOSS TO FRIEND

“There have been several mentors over my career, but I will have to say Mark Pringle tops the list, whom many of the ILMA members know well. Mark was my boss at Lubrizol for over 10 years and remains a good friend today. With his experience, he gave me the business tools, guidance and support to grow and be successful — not only within Lubrizol, but also with our customers.”

### LAKE IN ONE

“The funniest thing that’s ever happened to me? The top of the list must be falling into a lake on the ninth green at the Palmer Course, La Cantera, in San Antonio, Texas.”

Paterson (left) and his mentor and friend Mark Pringle enjoying a round of golf together.



### BEST JOB EVER

“I started my career as a development chemist with Ethyl Petroleum Additives in the U.K. before moving into more commercial roles, including sales and business management. ILMA has helped me truly understand the dynamics of the lubricant industry in North America. Having spent a major part of my career working with the oil majors, I transitioned to lead Lubrizol’s regional sales team to sell to our ILMA customers. It was enlightening not only to see the entrepreneurial spirit, but also to see how hard the member companies work to be successful in a very challenging regional and, in some cases, global market. A colleague of mine told me that working with the ILMA companies would be one of the best jobs I would ever have, and that is a true statement.”

### A GLOBAL VIEW

“In recent years, as a vice president at Lubrizol, I have had a global team and responsibility. I have to say traveling in Asia — in particular China and Japan — would be up there with my most memorable travel experiences. I particularly enjoy the local cultures and working with Lubrizol’s regional teams to develop new opportunities and grow our business.”

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