



Bulldog

2020 vision

A look at
the trends
shaping
the trucking
industry over
the next
12 months



Reducing risk
How to cut insurance costs

Winter is coming
Mack snowplows keep winter roads clear

Vintage refuse
Mack Trucks Historical Museum's new exhibit



MACK®



Born to be in the black.

The all-new, limited edition Mack Black Anthem®. With sleek black trim, premium black interior and an exclusive black bulldog, it does more than deliver a statement. It was born to put your business in the black.

See it at NACV Booth 6911 Oct. 28-31, 2019.

BORN READY.

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photos this page and cover: Jim McNamara



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Plan to Succeed

The future is never far away. If we want to control our destiny and be successful, we need to anticipate and plan for it. Mack Trucks constantly plans for the future, investigating new trends and technologies, potential changes in regulation and looking at the economy. We put those plans into action with new products like the Mack® LR Electric refuse truck and Over the Air to meet the new demands the future brings.

Decisions for the future require information in the present. We're in a dynamic industry in the midst of ongoing rapid change. Fleet managers need information to make the best operational choices. Drivers have access to detailed vehicle performance information in real time. Even our Mack trucks, still as tough and durable as ever, can now be looked at as connected devices, providing a constant stream of data.

Bulldog magazine also provides its own stream of information. The cover article for this issue is our attempt to predict what may happen in the next few quarters by looking at industry, economic, regulatory, equipment and technological trends, to help our customers better understand the outlook for their business.

The On Business article focuses on another profitable use of information, which is to reduce insurance costs for fleets. Technology, such as management systems enabled by Mack GuardDog® Connect, helps generate and provide this data and smart operators use it to improve safety and lower costs.

As always, we have profiles of tremendous Mack fleets in this issue. This time around we look at H&K Group, which recently celebrated its 50th anniversary and has always had a deep relationship with the Mack brand. Santmyer Transportation is an enthusiastic adopter of the Mack Anthem® and has grown from a small business to the largest fuel distributor in its region. And ML Crane Group uses its customized Mack Granite® tractors to haul enormous cranes and oversize loads all over the country.

We also take a deep dive into the rugged world of snowplows, to demonstrate how Mack plows keep the roads clear and traffic moving, no matter the conditions. And we take a look back at the early days of refuse collection as *Bulldog* examines the "Keeping America Clean" special exhibit at the Mack Trucks Historical Museum, with its vintage refuse trucks provided by Republic Services.

The trucking industry looks very little like what it was when those vintage trucks were the new tech of their day, a generation ago. But, as always, Mack will be listening to its customers and planning for our shared future. That's a long-term trend that Mack will continue.

Jonathan Randall
Senior vice president, sales & marketing



Full Tilt Logistics takes on the challenge of building a modern logistics business from the ground up in Episode 2 of "RoadLife 2.0." The series picks up from last season, sharing the stories of everyday people doing extraordinary things.

Mack Trucks' 'RoadLife 2.0' launches new season

Mack Trucks' "RoadLife 2.0" is on the air with four new episodes on roadlife.tv, with more to come.

The first two episodes feature the grueling efforts of Alaska Department of Transportation snowplow drivers to clear one of the snowiest highways in the U.S. and the challenge of building a modern logistics business from the ground up.

The third episode highlights the integral role Mack® trucks play in the success of Westcan Bulk Transport, one of western Canada's largest bulk transportation providers. With more than 1,200 employees operating across 16 locations, Mack trucks make up the majority of Westcan's fleet of more than 700 power units, including the new Mack Anthem® model.

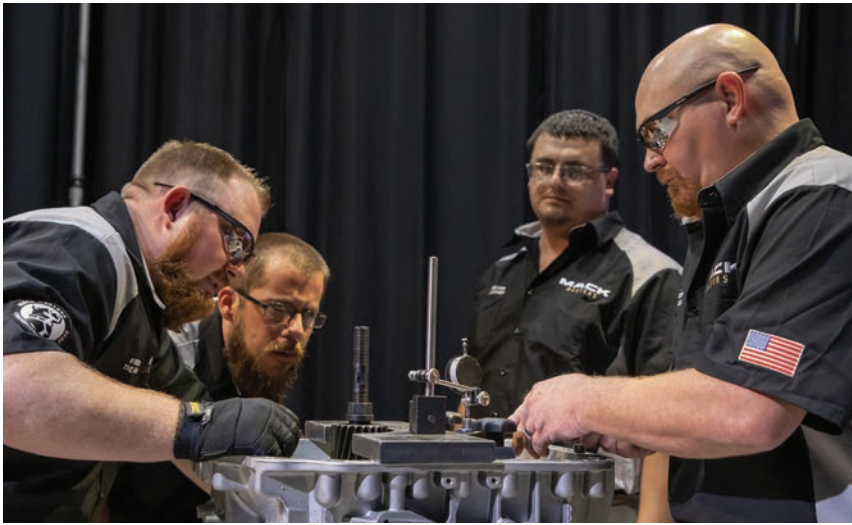
The Richardson Highway is the only road in and out of Valdez, Alaska, the terminus for the Trans-Alaska oil pipeline. Alaska DOT keeps it open with its Mack Granite® snowplows.

Reno, Nevada-based Full Tilt Logistics is featured in the second episode and takes the meaning of a family business to the next level. Starting with just three trucks, the Novich family quickly grew the business into a 16-truck fleet. Full Tilt relies on their growing Mack Anthem fleet to thrive and attract a waiting list of drivers.

"Our number-one customer is the driver. If we keep them happy, they will want to come work here," says Cris Novich, managing director, transportation for Full Tilt.

The most recent episode focuses on TransLand, known for being a premier transportation company in the U.S. While many trucking jobs have their own rewards, TransLand offers a career that goes beyond just a paycheck to help them attract the most committed employees.

View new episodes of "RoadLife" on roadlife.tv and Amazon Prime Video, with additional content featured on Mack Trucks' social channels: Facebook, Twitter, Instagram, LinkedIn and YouTube.



Mack Masters champions demonstrate Mack know-how

Team #RiseForTheAnthem was named champion of the 2019 Mack Masters Competition. The aftermarket team from Bruckner Truck Sales in Shreveport, Louisiana, completed several rounds of challenges designed to evaluate their knowledge of Mack® service systems. Team #RiseForTheAnthem's superheroes of service are Justin Malone, Joey Wardrip, Aaron Toomer and Ted Pfister.

Mack Trucks builds 100,000th Mack® GuardDog® Connect truck

Mack Trucks reached a significant milestone in its connected truck journey by building the 100,000th truck equipped with its Mack® GuardDog® Connect integrated telematics solution.

“From its launch with truck number one to now reaching 100,000 trucks, Mack GuardDog Connect has proven itself to be an incredible tool to protect and maximize our customers’ uptime,” says Jonathan Randall, Mack Trucks senior vice president, North American sales and marketing. “We’re proud to have reached this milestone and look forward to continuing to build on our uptime leadership with GuardDog Connect.”

Mack GuardDog Connect also serves as the enabling technology for Mack Over The Air, which provides remote software and parameter updates directly to customers’ trucks. Working with Mack OneCall agents, updates are scheduled at the customer’s convenience. Should a customer require frequent parameter updates, including changes to road speed limits, idle times, engine performance modes and more, a Mack Parameter Plus package allows customers to make up to 50 parameter updates per truck, per 12-month period.



Kriete Truck Centers invests \$6 million in expansion

Mack Trucks dealer Kriete Truck Centers has invested \$6 million in a new building, doubling the number of service bays at the Racine, Wisconsin, facility. The Mack® Certified Uptime Dealer location will also add a mezzanine in October to double its parts warehouse capacity.

“The new expansion enables Kriete Truck Centers to better serve their customers, providing the high level of support truck owners have come to expect from a Mack dealer and a Mack Certified Uptime Dealer,” says Jonathan Randall, Mack Trucks senior vice president of North American sales and marketing.

The original facility opened in 2005 and offers \$2 million in parts inventory. It now consists of two buildings, one of which is the new 25,000-square-foot expansion,



designed to extend Kriete’s management of concrete pump service and support its work with Putzmeister, a global leader in concrete, underground, mortar and industrial technologies.

Kriete’s new building expands the dealer’s retail service and body shop business to include collision repair and body painting, doubling its previous capacity. The new paint booth measures 85 feet long, 22 feet wide and 22 feet high, ideal for handling concrete pump equipment, such as the Mack

TerraPro™ or Granite® models equipped with Putzmeister concrete pump bodies. The facility has 15 bays, and Kriete plans to add 40 service technicians to manage the workload.

“It’s one of Kriete Truck Centers’ core missions to be the very best steward of the Mack Trucks brand,” says David Kriete, president and CEO of Kriete Truck Centers. “This expansion provides a state-of-the-art facility to better serve Kriete and Mack network customers to keep them on the road and help their businesses remain successful.”

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2020 vision

A look at trends expected to shape the trucking industry over the course of the next year.

By Olivia McMurrey





Many highway fleets are using telematics and predictive maintenance to help balance rising costs.

photo: Jim McNamara

While forecasters predicting economic trends for 2020 are sending mixed messages, we called on transportation insiders and Mack Trucks officials to help bring the business outlook for 2020 into focus. Here are their views on the economy, trucking-industry market trends, technology, the driver shortage, regulations and more.

Economic signals

Contradictory indicators and a looming presidential election are hampering clear economic predictions.

The U.S. unemployment rate fell to 3.6%, the lowest level since 1969, earlier this year, and consumer spending remains strong. According to a National Association of Business Economics' survey of professional forecasters as reported by Fortune magazine, the U.S. economy is slated to grow at 2.6% through 2019, then slow to 2.1% in 2020. A majority of those forecasters, however, think a recession is possible before 2021. An

inverted yield curve for U.S. Treasury bonds is fueling unease.

Trucking-industry gauges are disparate as well. Freight volumes in many segments are up, but rates are not. Average signing bonuses have decreased, yet the number of carriers offering bonuses has stayed high. Through a Bibby Transportation Finance survey of 250 trucking businesses

with between 1 and 100 trucks, 38% of respondents reported they expect to continue growing at 11%-25%, while 66% recounted losing a contract in the past year to a competitor offering unprofitable prices.

Abraham Davis, director of market intelligence for Mack Trucks, says the current economic view is being influenced by exceptional performance in recent years. "GDP [gross domestic product] is still solid," he says. "You have very strong record performance in 2019 that's moving back toward the good/normal range. When you look at year-over-year, indicators look worse, but fundamentals are actually solid."

Most Mack customers expect a slowing-but-strong economy, says Jonathan Randall, senior vice president of sales and marketing for Mack. Customers' biggest concerns, aside from a looming slowdown, continue to be driver retention and, for highway customers, shipping rates not keeping pace with increased costs.

Joe Keller, president of Marvin Keller Trucking, a regional carrier based in Illinois and operating 120 tractors to haul mainly

food-grade commodities, says a contract-shipping strategy has worked well for his company. "If you don't have any direct accounts and you just work through a broker, chances are you've seen your rate per mile drop significantly and your business drop off," Keller says.

In short, this is because freight capacity has loosened despite freight volumes remaining strong. High rates in 2018 prompted fleets to expand and encouraged owner-operators to enter the market, leading to more trucks on the spot market in 2019.

"We feel like we've been able to, for the most part, stand pat from last year," Keller says with regard to shipping rates. "There's no question there's a little bit of softness, but our customers seem to be in lockstep with the consumer-driven economy, and we are seeing the consumer being strong. So I think that's helped us quite a bit."

"My guess is the next six months are going to be good. And then after that, all bets are

off. When there's a presidential election coming, businesses kind of tread water until the elections are over."

"You have very strong record performance in 2019 that's moving back toward the good/normal range."

Abraham Davis, director of market intelligence for Mack Trucks

Trucking industry market trends

Customers are appreciating that trucks are more efficient than ever, and the new engines and emissions equipment have proven themselves with years of real-world operation

Local requirements will lead to smaller "last mile" trucks and potentially electric trucks in inner-city applications in coming years, Randall says. He also says electronic logging devices and continued expansion of the hub-and-spoke model — where a central hub (distribution center) is connected to freight lanes running along "spokes" — means the day-cab business will become a larger portion of the truck-sales market in the near future. "One of the largest builders of brick and mortar in the United States right now is also the No. 1 online retailer," Randall says. "And they just started a fleet of trucks. Other traditional

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retailers who are seeing more of their revenue come from online retail, like Walmart, also have their own trucks. So the big retailers are either already in, or considering getting into, the trucking business.”

This means truckload carriers currently operating on tight profit margins are going to be squeezed. “They’re going to have to figure out ways to operate at a better efficiency and be more competitive with Amazon or a similar company who thinks they can do it cheaper themselves,” Randall says.

On the positive side, more hub-and-spoke operations might ease challenges associated with driver recruitment and retention, since drivers will be home every night.

Last-mile delivery is another area where big change is expected, but whether robots, drones or another technology/method emerges is uncertain. Randall says he doesn’t foresee significant changes with last-mile delivery in the next year. “I don’t think there’s going to be one watershed moment that makes it gel one way or the other, but it’s going to be ongoing investment and validation,” he says.

Innovation and technology

Two factors — safety and reduced operating costs — are driving technological innovations in commercial trucks. “And in that order,” Randall says. “We’re asking, ‘What can autonomy mean for safety?’ And ‘What can Over The Air and uptime mean for operating costs? Not only for the drivers,



Most truck owners in the construction segment expect to maintain steady growth in 2020.

but for the general public?’ And then, ‘What does it mean for customers’ operating costs?’”

Automation

Mack’s highway models, the Mack Anthem® and Mack Pinnacle™, both come standard with the Bendix® Wingman® Fusion™ system, which provides collision mitigation, adaptive cruise control and lane departure warnings. Fleet, driver and general-public views of

increasing truck autonomy are mixed.

“Generally, larger fleets are leading the charge with adoption of advanced technology such as automation” Randall says. “Some of our customers believe level four autonomy is the future for them in a big way for safety. Does that mean having a human and the cab? Most likely. But no feet, no hands” he says, referring to hands-free driving and automated braking, also known as Advanced Driver Assistance Systems or ADAS.

Predictions for trucking-industry market segments

Unique forces are impacting the on-highway, construction and refuse segments of the trucking industry. We delve into their effects below.

Refuse

Mergers and acquisitions and changes in recycling markets are the major trends that will affect the refuse industry in 2020, says Curtis Dorwart, refuse product manager for Mack Trucks.

While mergers and acquisitions are a positive indicator for business, they aren’t equally advantageous for all those in the refuse industry. “A lot of the smaller guys are getting absorbed by the larger players,” Dorwart says. For the bigger companies, this means increased leverage when negotiating prices for trucks and truck bodies and when

discussing rates with their customers. For smaller companies, it adds pressure to find different ways to compete. Because they might not be able to match or beat a larger company’s rates, they could provide a higher level of service or offer recycling services not provided by the competition, Dorwart says. In some areas, symbiotic relationships are emerging. For instance, a large company fires an outlying customer because of low profit margins and a smaller company takes on that customer and does well with it.

Foundational shifts in the recycling market are underway and are making it difficult for U.S. municipalities and refuse companies to turn a profit in this arena. In the past, most plastic going into American recycling bins was baled up and sent to China in empty shipping containers that had been used to bring Chinese goods to the United States. But with the rise of

a Chinese middle class, China is generating its own used plastics. As a result, the price China pays for American plastic has dropped significantly, and the Asian nation has placed strict cleanliness requirements on U.S. products. This situation means the refuse industry in the United States is struggling to find solutions. Among the possibilities, Dorwart says, are developing a domestic industry for cleaning up and/or recycling plastics, lowering processing costs with better sorting technology and returning to multiple-stream recycling, in which consumers must sort their recyclable waste into separate bins.

From time to time, the waste stream changes significantly (when printed newspapers declined, for example), and now the “Amazon effect” has vastly increased the amount of cardboard in the system, Dorwart says. Luckily, China is still keen on importing



“The bigger hurdle, I think, for autonomy is not going to be whether the technology is ready but whether the general public is comfortable and the legislation is able to keep up.”

Jonathan Randall, senior vice president of sales and marketing for Mack Trucks

“The bigger hurdle, I think, for autonomy is not going to be whether the technology is ready but whether the general public is comfortable and the legislation is able to keep up,” Randall continues.

Connectivity

Truck connectivity has exploded in recent years, and that trend will continue.

The most recent innovation, Mack® Over The Air, launched in 2017 and expanded in

2018, delivers software updates and vehicle-parameter changes anywhere in the United States and Canada where a cellular connection is available. By using OTA, fleets can compress the amount of time required to update software or vehicle parameters from a day or more out of service to as little as 20 minutes in the fleet’s yard.

Truck owners also can use Over The Air to make their own changes, including adjustments to speed governors and the way the transmission engages at different speeds. All

these capabilities reduce dealer service fees and increase revenue by preventing downtime.

“Idle settings are going to be a big one for us, and that’s a tremendous flexibility that we really appreciate,” in addition to the cost savings, Keller says.

Electric trucks

Electric trucks also are in the cards, and Mack is leading the way with the all-electric

paper and cardboard due to its poor timber industry. “So that will continue to be a little bit of a bright spot,” Dorwart says.

Construction

Relative to their counterparts in other trucking-industry segments, those involved in construction are feeling more confident. Tim Wrinkle, construction product manager for Mack Trucks, says truck owners in the construction segment expect to maintain steady growth in 2020.

Two big influencers — infrastructure spending and private construction — are stable, Wrinkle says. “A whole lot of warehouses are being built with the trend toward e-commerce,” he says. “Having more goods closer to customer endpoints is really driving that. And it’s a lot of concrete being poured.” Such construction also entails site-prep work and road building.

Truck-related trends include maximizing payload to improve efficiency and using telematics for scheduling. Mixer-truck owners are adding lift axles and different configurations. Whereas a 10-yard barrel was typical in

the past, 12-yards are common now in states where they’re allowed. In the same vein, dump-truck operators are choosing light-weight bodies to increase haul capacity.

One of the most advanced areas for telematics is time-sensitive mixer-truck applications. Once the product is onboard, the driver has only 90 minutes to unload it. Owners are using GPS not only for location data, but also to check which way the barrel is turning. This tells them whether the truck is maintaining or discharging concrete. Sensors also can track how much water is added to the concrete while it’s in the truck. Adding water can lengthen shelf life, but lowers quality.

On-highway

Stu Russoli, highway product manager for Mack Trucks, says a lot of regional- and long-haul trucking companies are looking at upgrading their fleets, and he doesn’t think that would be the case if they were overly worried about a possible economic slowdown. “We see the overall market volume going down a little bit, but I don’t think that reflects that people aren’t optimistic,” Russoli says. “They just may have already bought so

much that it’s slowing up, which it has to do at some point. As far as the customers I’ve met with, they’re going out to buy and they’re not being shy about it.”

Most highway customers are interested in addressing the segment’s chief concern — expenses rising faster than shipping rates — with telematics. Maintenance and fuel savings can help balance driver pay and benefits increases, but companies need data and efficient trucks and service to make this work.

Many fleets used to do maintenance on all their trucks at the same time intervals, Russoli says. Telematics allows fleets to take a smarter approach. “You’ll have a telematics chart coming in and you’ll know, for instance, one truck’s running a lot more or has more idle time,” he says. “So you can manage maintenance better and actually do what is needed because you’re looking at the mileage and the hours on the engine.”

Mack Over The Air updates are another way to cut maintenance costs since software updates and parameter changes can be conducted without bringing trucks to service centers and losing half a day or more of productivity.

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Mack® LR refuse truck. The New York City Department of Sanitation and Republic Services, a waste collection company based in Phoenix, Arizona, will be testing demonstration models in 2020.

“We believe this is the right industry to test this technology,” Randall says. “It’s rugged, it will test the battery density and will test the batteries’ ability to manage parasitic load while still meeting demand for propulsion, and it will lead to further development in other of our equipment.”

“Our belief is that hub-and-spoke, city-delivery and stop-and-go applications, and maybe even some regional haul, make the most sense for fully electric trucks.”

Davis says while there is still a market for alternative fuels such as natural gas, the industry is moving toward electric technology.

Service and body installation with an electric powertrain versus a gas- or diesel-powered truck also will be completely different, Dorwart says. “We’re using these first couple of vehicles as a learning experience both for customers as well as us,” he says. “There’s a huge learning curve and a huge training requirement that’s going to have to take place in the industry as electric propulsion systems develop.”

Electrification of some truck systems, such as auxiliary power units, is also expected to increase.

What drivers want

Even with freight capacity and freight volume lining up better this year, labor remains a top concern throughout the industry. According to the American Trucking Associations, the driver shortfall is expected to decrease slightly from 2018’s peak of 60,800 to 59,500 by the end of 2019, due to slower economic growth and a small bump in supply.

Because of the labor shortage, drivers are influencing the equipment that fleets are buying, Randall says.

Marvin Keller is spec’ing trucks with creature comforts and conveniences. For instance, all the Mack Anthem® models the company recently purchased include refrigerators.

Safety features and other types of technology also are attracting younger drivers, Keller says. “Millennials don’t question technology, they expect it,” he adds. “And actually, the more complicated, the better. They’re more techie and gadgety.”

Mack has noticed this tendency as well, and trucks are beginning to reflect it.

“The next generation is used to working with screens,” Randall says. “They’re used to working with a lot of data and stimulation. So, as we design our cabs and trucks going forward, we’re designing them to interact in a way that today’s generations interact with their devices.”

Features that make getting into the

Mergers, acquisitions and changes in recycling markets will continue to affect the refuse industry.

trucking profession easier and assist carriers with onboarding are gaining popularity as well. The prime Mack feature in this arena is the *mDRIVE*™ automated manual transmission.

Since the *mDRIVE* was introduced, its acceptance rate has soared, and it’s now available in highway and construction models. Currently, the take rate is greater than 90% in the Anthem highway model and greater than 70% with the Pinnacle model. More than 80% of Mack Granite® models sold have automated transmissions.

“The manual transmission is in the minority now for sure,” Randall says. “And if you had told me 15 years ago that would be the case, I would have said you were nuts. But now we’re proving it. This advancement has done

Mack order trends

Lunched in 2018, the new Mack Anthem highway tractor was a full-scale redesign of the previous highway product. The Anthem’s features and style have garnered Mack new customers, including Marvin Keller Trucking, which purchased 17 Mack Anthem models.

“We’ve got reorders from the first of the early adopters of the Anthem — not only the customers we already had, but also the customers that we’ve gained,” says Jonathan Randall, senior vice president of sales and marketing for Mack Trucks. “As a result, we’ve seen a bump in our market share in the long-haul segment.”

Anthem has been extremely successful in both the regional- and long-haul markets. In addition to carrying on Mack’s reputation for reliability, durability and cutting-edge technology, the Anthem has been lauded for the attention designers paid to driver comfort and convenience — details that help customers attract and retain drivers. The stand-up



Marvin Keller Trucking, a new Mack customer, recently purchased 17 Anthem models.

sleeper is particularly popular.

The Granite®, Mack’s industry-leading vocational offering, and the Pinnacle highway

tractor both sport redesigned interiors that incorporate the Anthem’s ergonomic and driver-friendly features.



photo: JSR Studio

a really good job of opening up the driver pool and allowing less experienced drivers to learn the trade.”

More traffic congestion also has contributed to the shift away from manual transmissions since stop-and-go conditions increases fatigue when drivers have to push the clutch pedal and shift gears.

Time over money

Marvin Keller is working on several methods for achieving another goal of its driver recruitment and retention strategy: increased home time.

The main tactics the company employs are operations and scheduling adjustments.

Noticeably absent from its lineup are bonuses. “If you’ve got to pay big bonuses for people to come to your company,

then when another bonus is available, they’re just going to leave as quickly as they came,” Joe Keller says. And besides, “We’ve found that for many drivers, money is not their top thing; home time is. They want to work less and be home more.”

Keller says a trend of fewer drivers staying on the road a week or two at a time — a shift likely caused by the increased hub-and-spoke activity discussed earlier — is making finding drivers who will take jobs with those requirements more difficult. So Marvin Keller is trying to manage its operations in ways that allow drivers to be home as much as possible.

“It’s almost getting to the point where we might need two drivers for each truck instead of one,” Keller says, adding other fleets are considering this as well. “We’re seeing rotations where maybe a driver will only work three or four days a week. And maybe they

do something local for a day. And then that’s a full week for them. Those are some of the things we’re experimenting with.”

Regulations

Several recent or upcoming regulatory changes will affect trucking businesses in 2020.

Drug and Alcohol Clearinghouse

In 2020, the driver shortage could be exacerbated by FMCSA’s CDL Drug and Alcohol Clearinghouse, set to become operational in January. The Clearinghouse is a database employers must query to identify drivers who are prohibited from operating a commercial motor vehicle based on DOT drug and alcohol program violations.

Greenhouse Gas Phase 2

Next year will see production of the first heavy-duty trucks affected by Greenhouse Gas Phase 2 regulations, which set requirements at the engine level and the vehicle level to improve fuel economy and reduce harmful emissions. GHG Phase 2 standards take effect in three phases that begin with model years 2021, 2024 and 2027.

Truck buyers will benefit from GHG Phase 2, Davis says. “They don’t pay more for less; they are getting a more efficient vehicle,” he says. “We don’t see it having a big impact on the market.”

ELDs: unintended consequences

To help offset fewer hours driven because of stricter record-keeping due to electronic logging devices, some fleets are lifting their road speed governors a few miles per hour,

something easily done with OTA. At the same time, customers are recognizing the need for enhanced aerodynamics and other systems, such as lift axles, to improve fuel consumption.

Hours-of-service proposal

Most trucking-industry organizations, including ATA, Truckload Carriers Association and Owner-Operator Independent Drivers Association, are supportive of the hours-of-service proposal FMCSA published in the Federal Register Aug. 22, opening a 45-day comment period.

Under the proposal, drivers would be able to pause their 14-hour on-duty clock for up to three hours, use a new split sleeper berth option of seven hours and three hours, have more flexibility surrounding the 30-minute break requirement and extend their on-duty window when faced with adverse weather and traffic conditions. The agency also suggested expanding the short-haul exemption, which would allow more drivers to avoid keeping duty-status records.

Infrastructure spending

In recent years, the need for federal infrastructure spending has, at times, been a rare area of agreement between Democrats and Republicans on Capitol Hill. Legislation deemed the “most substantial highway legislation in history” is making progress in the U.S. Senate. The five-year, \$278 billion bill titled America’s Transportation and Infrastructure Act of 2019 cleared the Senate’s Environment and Public Works Committee in August.

The new legislation would replace 2015’s FAST Act, which expires in December 2020.

Randall says Congress might not approve the legislation until after the presidential election, but in the meantime, states are spending enough for infrastructure-related construction to remain robust next year.

Keller notes Illinois recently raised fuel taxes to help fund infrastructure projects. “It’s a good thing,” he says. “We can build some roads and bridges, repair others.” ■

“We’ve found that for many drivers, money is not their top thing; home time is. They want to work less and be home more.”

Joe Keller, president of Marvin Keller Trucking

Cost control

How fleets use technology
and safety initiatives to
reduce insurance costs

By Denise L. Rondini



One of the greatest expenses of operating a trucking company is insurance. The company's risks and responsibilities are reflected in the steep cost of insurance premiums — which are directly impacted by rising costs of settlement and litigation. While advances in safety technology ought to keep rates down, the truth is that managing key cost trends requires constant effort.

The good news is there are steps fleets can take to lower their insurance premiums and make their fleets safer.

Obsession with safety

Insurance premiums cost fleets between 7.5 cents and 8.8 cents a mile, or 4% of their total average margin costs, according to the American Transportation Research Institute. The reality is those costs can be even higher because self insuring and high deductibles can give the appearance that insurance costs are lower than they actually are.

Michael Nischan, vice president of transportation and logistic risk control at EPIC Insurance Brokers & Consultants, says that “fleets need to be obsessed with safety.”

Part of that obsession should include an investment in safety-related technologies coupled with operational practices that demonstrate a commitment to safety throughout the fleet. This includes adhering to all driver qualification standards, drug and alcohol testing standards, hours of service regulations, cargo securement standards and complying with Federal Motor Carrier Safety Administration safety regulations.

Insurance companies consider a variety of factors when determining whether to insure a fleet and what plan premiums should be. Terri Lutz, vice president of risk management at Transervice Logistics, says some of the questions that have to be answered include size of the fleet, types of vehicles in the fleet, radius of operation, driver selection process and products being hauled. However, when promulgating premiums, one of the biggest factors is prior loss experience. In other words, how many accidents and therefore claims has the fleet experienced in the past three years?

Technology upgrades

Bad prior loss experience does not have to define a fleet forever. A wide range of technologies on the market today can help reduce the number or severity of accidents, and can demonstrate to an insurance underwriter that drivers are operating safely and fleet managers are working hard to provide coaching in instances where problems occur. These include cameras, lane-departure warning systems and collision mitigation systems, all of which serve to

lessen the chance of a vehicle being involved in an accident.

“Fleets with poor loss experience can over time see savings because of technology. If you have a lot of side sweeps or rear-end collisions, there is technology that can mitigate those losses. Over time you won’t have those claims anymore and so you become a lower risk. This can lead to the fleet enjoying some savings down the road, but it will not happen right away,” Lutz explains.

In essence, a fleet has to take action to improve its loss experience. “Your past loss experience is indicative of your future potential loss if you don’t change anything. Over time if a fleet makes these technological investments then they won’t have those three to four rear-end accidents and they won’t have those five to six side-swipe events.”

Nischan encourages fleets to review their SMS reports each month to look for things like the type of moving violations the fleet has been cited for, types of maintenance issues found during roadside inspections, and percent of out-of-service violations for drivers and trucks.

“Figure out what the trends are and then address them by applying your policies, procedures, training and disciplinary actions to change behavior,” Nischan says.

Get smart with telematics

Data from telematics systems, especially those that incorporate cameras, allow fleet managers to see not only what is going on in the cab but also on the road. Cameras give context to the data, which can help with behavior management.

According to statistics from Lytx, makers of an onboard camera, DriveCam, fleets that have camera-equipped trucks can see claim cost reductions of up to 80%, plus a 50% reduction in collision frequency. This is significant given that the Federal Motor Carrier Safety Administration found that the average cost of a large truck crash with a fatality is \$3.6 million, and a crash with injuries costs



Installing on-board video cameras can help lower insurance costs.

on average \$200,000. However, in the past five to six years, Nischan says there has been a rise in “nuclear verdicts” following truck accidents. “It used to be that we were seeing verdicts of \$750,000, maybe up to \$5 million, but in the past few years we have seen staggering numbers — \$10 million, \$20 million, \$50 million, even \$90 million verdicts.”

Nischan says cameras, lane-departure warning systems, collision avoidance systems and other safety related technologies are not a guarantee of a lower premium but are one piece of a fleet’s overall commitment to safety and dedication to a safety culture.

Focus on accountability, communication

Technology alone is not enough, he says. “The company needs to have someone who is accountable for the overall risk

management, compliance and safety process. You need to have a transportation management program and you need to make sure that all levels of the organization are educated [about safety],” he says.

When rolling out safety technology in general, and driver-facing cameras in particular, Nischan says a fleet should not just announce that it is installing cameras and tell drivers they have to deal with it. Rather they need to make sure drivers understand the purpose of the cameras and that the fleet allows coaching and feedback within the first 60 days before taking any punitive measures. “When you install the camera, give feedback and provide coaching and ongoing training. This will change the company’s safety culture as well as driver behavior,” he says.

“During preliminary rollout your culture will change, driver behavior will change, drivers will become safer and therefore less likely than they were at the beginning of that trial period to be involved in a collision.”

Both Nischan and Lutz were clear that a safety culture starts at the top. “You need to have buy-in at the uppermost levels of management,” Lutz says. “And then it must flow all the way down the organization. In addition, you have to be willing to expend resources, time and money on your safety initiatives.”

Insurance companies define trucking as a very difficult class of business to insure, but by investing in technology and having safety programs and with best practices in place, the fleet can be an excellent risk and should be able to keep its insurance premiums to a reasonable level. ■

“During preliminary rollout your culture will change, driver behavior will change, drivers will become safer and therefore less likely than they were at the beginning of that trial period to be involved in a collision.”

Michael Nischan, vice president of transportation and logistic risk control at EPIC Insurance Brokers & Consultants

TRENDS A roundup of the numbers that drive your business.

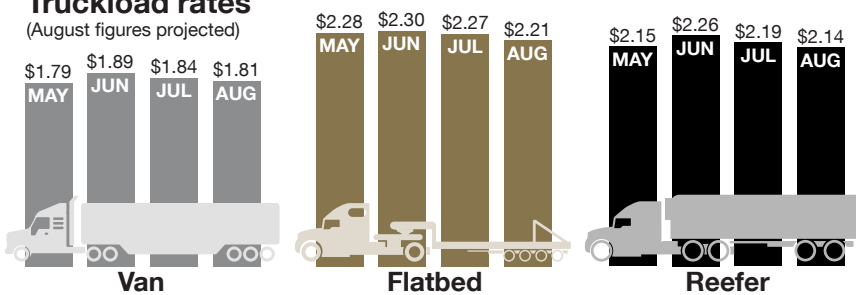
INFRASTRUCTURE

\$278 billion
infrastructure package

A five-year, \$278 billion package being hailed as the “most substantial highway legislation in history” cleared the U.S. Senate’s Environment and Public Works Committee in August. It would succeed 2015’s FAST Act, which expires in December 2020.

FREIGHT

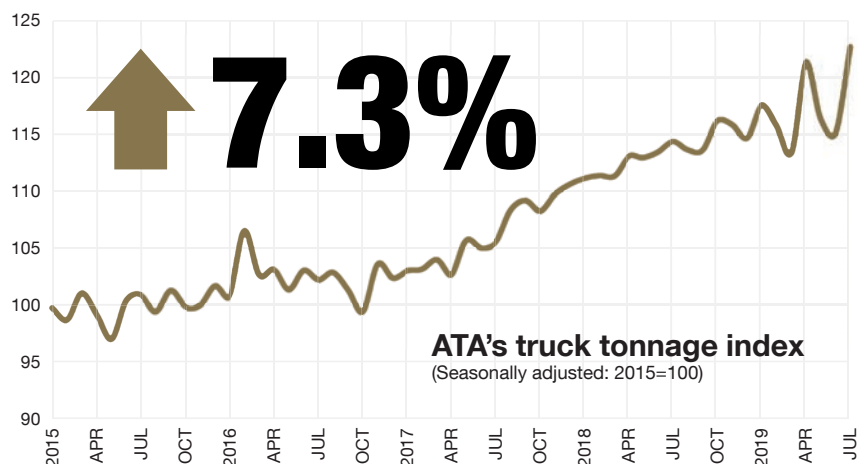
Truckload rates (August figures projected)



Spot market rates: Down Contract rates: Steady

While per-mile rates on the spot market are forecast to decline 18% in 2019 compared to 2018, contract rates are expected to hold flat, according to freight research group FTR.

Truck tonnage UP in a rollercoaster year



Despite month-to-month volatility, truck tonnage was up 7.3% in July 2019 compared to July 2018 and has increased in 2019 overall, per American Trucking Associations data. Tonnage in 2019 has been on a rollercoaster ride, but is still on a nice upward path, says ATA Chief Economist Bob Costello.

LABOR

7,300 more jobs

The for-hire trucking industry added 11,700 jobs in the first half of 2019. The U.S. Department of Labor says 7,300 jobs were created in the second quarter, with 4,300 of those added in June.

CARGO THEFT

↓ 14%

Thefts decline in second quarter; trailer burglaries trending

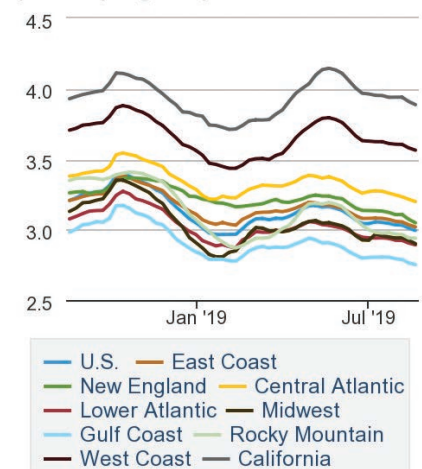
CargoNet reports that thefts declined 14% during the second quarter of 2019 compared to the same time in 2018. Food and beverage products led the list of items stolen via trailer burglaries.

FUEL

↓ \$0.213

On-Highway Diesel Fuel Prices

(dollars per gallon)



Source: Energy Information Administration

Fuel prices decline slightly YOY

Average on-highway diesel fuel prices in the United States fell from \$3.078 on April 1 to \$2.994 on Aug. 19. That price is down \$0.213 compared to the same date in 2018.

Source: U.S. Energy Information Administration



AT WORK

Legacy of growth

H&K Group, Inc. celebrates 50 years of success and close partnership with Mack Trucks

Story by Carolyn Mason

H&K's "Adirondack Green" Mack® Pinnacles™ and Granites® are a common sight in eastern Pennsylvania and beyond, as they move material between quarries and roadbuilding sites.

John B. Haines IV, the patriarch and founder of the Skippack, Pennsylvania-based H&K, takes pride in his company's half-century legacy as he guides the passing of the torch to new generations of family management. While he is synonymous with the H&K brand, he's also known for his love of all things pertaining to Mack, including his first truck.

"Our first Mack trucks were a pair of 1969 U models purchased from Keystone Mack. My former partner, Terry Koch, and I demoed one of the U Models, drove it to Bethlehem, Pennsylvania, to perform some sitework and

pick up a loader. On the return trip, the power of the Mack amazed us both and we were immediately hooked. We purchased both U Models and have been buying Macks ever since," Haines says.

A history of growth

It's been more than 60 years since Haines started a small excavating company operating out of his family farm in Worcester, Pennsylvania. In 1957, as he started working on more complex civil construction projects, he teamed up with his friend Terry Koch. Then, in 1966, his friend John R. "Jack" Kibblehouse came on board. By 1968 they had formed Haines & Kibblehouse Inc., now known as the H&K Group Inc.

What started out as a small contracting business that began with the excavation of basements has spanned three generations of growth. The H&K Group "Family of Companies" is comprised of an assemblage of vertically integrated companies providing complete heavy civil contracting and construction materials products and services through over 80 operations in three states including eastern Pennsylvania, New Jersey and Delaware. It employs over 1,800 skilled tradespeople, professionals and administrative personnel.

Powered by Mack

The Mack/H&K relationship has always been about communication and feedback. One



Photos by Kirk Zutell

great example is the test fleet and component testing program enacted between 2005 and 2008. H&K tested three vehicles for Mack as well as new engine types, prototype new cabs, a new fuel injection system, fuel mileage testing and numerous parts and components over the years.

Dan Alderfer, truck fleet superintendent for H&K, says the relationship between Mack and H&K has always been a strong one. One critical component of the relationship was the close proximity of Mack's Lehigh Valley, Pennsylvania, manufacturing facility to H&K's operating footprint. Vehicles and parts could literally be tested in real time, studied and analyzed while H&K was performing its daily work. "This was truly a unique and amazing opportunity for both parties as each got to



Scott Haines, president and CEO of H&K, and Mark Frickmann, a driver for Haines & Kibblehouse Inc., check out the new Mack® Granite®.

build the trucks or its components to suit real life and real time conditions," Alderfer says.

Today, H&K operates more than 350 Mack trucks in on- and off-road applications and has purchased 56 Mack trucks in the past four years, including 35 Granites and five new Mack Anthems®. The Granites are primarily axle back, tri-axle dump trucks with a 219-inch wheelbase and some are used as fuel trucks, tankers and block trucks.

The five Anthems are used with tar tanks, flatbeds and frameless dump trailers. They also use the 455 hp MP®8 engine, along with the 12-speed Mack *mDRIVE*™ automated manual transmission, and Mack's liftable pusher axle for a weight-saving 6x2 configuration.

Many of the off-road trucks are Mack dump trucks that have been reassigned over the years from the higher-mileage, on-road category. Alderfer says he likes the toughness of the Mack trucks. "We run them hard, but we don't beat them." He is also pleased with how much the drivers like the equipment.

Tom Procher, sales representative with Bergey's Truck

Centers, has sold Mack trucks for 48 years, and worked with H&K in that role for more than 20 years.

Procher works with Alderfer at H&K, but says he's always remembered what John B. Haines IV told him a decade ago. "We were discussing buyer-seller relationships and Haines said, 'I don't look at them as vendor-customer relationships. I look at them as partnerships and, when we do well, you'll do well,'" Procher says.

The business

H&K's ability to survive and adapt to the challenges of the 2007-2009 Great Recession shows the value of the culture and expertise the company developed over its 50 years. The severe downturn forced H&K's management team to adjust and rethink its operational objectives. The company restructured and looked for opportunities in a challenging market. Desiring to capitalize on federal stimulus and infrastructure spending, H&K pivoted

into the heavy civil construction sector and by 2013 was securing infrastructure contracts throughout the region. This endeavor was key to H&K's recovery from the downturn and continues to define the industry prominence of H&K to this day.

President and CEO Scott Haines says they are a stronger and better company for having gone through the Great Recession. "I've learned a lot personally about business and having the right people in the right positions within the company. The downturn forced us to restructure many departments within H&K. We've also gone back to basics.

Through it all, we're

now poised to perform just about any infrastructure project that the state or this country has to offer."

"My former partner, Terry Koch, and I demoed one of the [1969] U Models ... the power of the Mack amazed us both and we were immediately hooked. We purchased both U Models and have been buying Macks ever since."

John B. Haines IV, founder of H&K

Next generation

Many private companies face the challenge of leadership transitions between generations, but not all plan as thoroughly as H&K. The company is now led by a group of the

continued on page 17

AT WORK

Trucking tribute

"Lil Hooker," a 1919 AC Mack, was originally sold to Henry's Garage in Trenton, New Jersey, in 1920. Later, it was purchased by John B. Haines IV and restored by Arthur Cooper.

Visitors gawk at the sheer size and scope of John B. Haines IV's vast collection of antique Macks, all lovingly restored and displayed in three large museum buildings on his property in Pennsburg, Pennsylvania. His collection includes one of the oldest Mack trucks, a 1919 AC Mack "hooker," and four 1920s era Mack ACs. Haines says he and his longtime friend Art Cooper, a master restoration specialist and curator of the museums and its contents, work on the collection seven days a week. In mid-2019, Haines Historical Foundation was established as a nonprofit charitable organization. HHF was conceived by John B. IV and Linda Haines to formally preserve, manage, maintain and further develop the museums, antiques, collections and historic grounds of the Haines Estate.



LEFT: John B. Haines IV collects, restores and displays vintage Mack trucks and other antique trucking, farm and construction equipment.

ABOVE: A restored Mack AB 1926 Richfield Petroleum truck is part of the Museum's collection. Richfield Petroleum is the company that originally sold oil to Haines & Kibblehouse.

Legacy of growth

continued from page 15

second-generation leaders: Haines' oldest son, Scott B. Haines, as president and CEO; James T. "Jim" Haines serving as vice president and COO; John R. Kibblehouse Jr. as vice president, secretary/treasurer; H. Christian "Chris" Budenz, executive vice president, assistant secretary; Stephen M. Nelson, vice president, assistant secretary and both John B. Haines IV and Jack Kibblehouse fill the co-chairmanship roles on the Board as they mentor the younger generations.

The company refers to leaders as being G1, G2 or G3 to indicate which generational cohort they belong to. There is a formal process to foster leadership training, communication and mentoring among the generations. The leaders are hands on as they work with the younger generation to build a framework for the company's continued future success.

Jim Haines says they want to make sure that H&K is here for the next half-century and beyond. "The G2's primary objective is to prepare our G3 leaders for their future roles within the company. Secondly, it is imperative that we, as G2 leaders, leave the company in a better place than when we found it. This is much easier said than done, considering what my father, Jack and the other founding partners achieved during



Jennifer Bealer, one of H&K's third generation leaders, coordinates events and manages their social media strategy.

their tenure at H&K. Our generation of corporate leadership must make every effort to ensure that we provide the experience and guidance necessary to get our future leaders ready to go when we step down."

The G3s grew up in the company, attending company picnics and working summer jobs, and have rotated between various departments for extensive experience. They also attend management meetings as they work alongside the G2s.

Jennifer Bealer, stepdaughter of Co-Chairman of the Board, Jack Kibblehouse,

is Public Relations and Event Coordinator at H&K. She says she's worked to bring the company into the world of social media, with all of its advantages and challenges. "We have to have a strong social presence for recruiting employees, and customers expect to find you on social," she says. She's revved up their Facebook and LinkedIn communities and continues to add more media outlets as they emerge.

Scott Haines says that he's been impressed with the level of respect and the eagerness to learn shown by the third generation and wants them to feel the pride that comes from being part of a family-owned company. "They put in the time and effort and it pays off," he says.

That commitment to family, business and tradition continues, as does the strong relationship between Mack and H&K, Scott Haines says.

"The Mack/H&K partnership over the last half-century been a model of trust, feedback, responsiveness, service and performance. There is no substitute for any of these elements when materials, manpower and projects are in the balance and failure is not an option. Mack has simply delivered for H&K and the partnership we have forged has been key to our shared successes." ■

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AT WORK

A vision for success



Santmyer grows with people,
technology and Mack

By Jim McNamara



photos by Colin McGuire

Myron Santmyer started the family business in 1952

with one gas station and one employee (not including himself). He found an opportunity to expand the business modestly in the early 1960s when he bought a truck to distribute heating oil and other products. His son, Terry, bought the business in 1980 when it consisted of two trucks and three employees. The market has changed dramatically since then and the company is now in the hands of the third generation of Santmyers.

Today, the Santmyer Companies transport more product in a single day than it did in an entire year in the early 1980s. The Wooster, Ohio-based petroleum distribution and transportation company now operates out of 19 locations in six states from West Virginia to Indiana, and delivers several hundred tanker loads daily, with more than 200 employees and 100-plus trucks.

Delivering fuel and petroleum products is not an easy market segment. Competition for customers, technicians and drivers is fierce. Safety is always the number one focus. And technology continues to change.

“You have a lot more competition now,” says Terry Santmyer, chairman of the company. “You’ve got more rules and regulations now. It’s a lot more complex than it was just 15 years ago. Volume is bigger than it was back then, but it’s based off fewer customers.”

Growth came from taking business risks, Terry says. “I took a contract that guaranteed I’d haul on weekends and holidays. That’s how I got my first big account.” That willingness to take on challenges has continued. “A lot of companies like us don’t get into all the things we do. They’re just oil companies or just trucking companies. We do it all. And we can do things most other companies can’t do.”

The company recently restructured into three divisions, one for bulk fuel, lubricants, and propane distribution, one for transportation and one for its retail convenience stores and automated fueling stations. “The realignment of the company helps us to better serve our customers, advance the use of technology, and promote safety throughout the organization,” says Zach Santmyer, one of Terry’s sons and president & CEO of the company.

One of the ways Santmyer differentiates itself from competition is its willingness to meet each customer’s individual needs. The fleet’s operating area includes congested urban areas like Cleveland, rural destinations and everything in between.

The fleet goes to “a lot of delivery locations, like gas stations, trucking companies, quarries and construction sites,” Zach says, “There’s a variety of different delivery locations and each of them have a different way

in and out, different setup, different tank sizes. With what we do and what we haul, it’s hazardous — it’s gasoline and it’s diesel fuel. Mistakes and delivery errors are costly, not only money, but to people, the community and the environment.”

That requires a safe, maneuverable and reliable truck. Santmyer has relied on Mack® trucks since the early 2000s, and has turned to the Mack Anthem® within the past two years to get maximum fuel economy and driver satisfaction.



“A lot of companies like us don’t get into all the things we do. They’re just oil companies or just trucking companies. We do it all. And we can do things most other companies can’t do.”

Terry Santmyer, company chairman

The Anthem has been “a great experience,” says Nate Santmyer, Zach’s brother and the Commercial Fuels director for the fleet. “We have 15- and 20-year drivers with us, and they say it’s the best truck they’ve ever driven.”

One of the things they like is the performance and power of the Anthem day cabs. The trucks are set up with Mack MP®8 engines and mDRIVE™ transmissions. Nate likes the high torque the MP8 delivers.

“Torque’s where it’s at,” he says. “I don’t think you need as much horsepower if you have the Mack torque.”

The company tracks fuel economy with

AT WORK



Zach (left), Terry (middle) and Nate (right) Santmyer in front of some of their new Mack Anthem® models.

Mack's GuardDog® Connect and its fleet management system. "It's been phenomenal with the Macks compared with our prior trucks," Nate says. Santmyer has been averaging about 6.8 mpg with its Macks versus the 5.5 mpg averaged by other makes in his fleet. The Anthems are outfitted with factory-installed liftable pusher axles to save weight and improve fuel economy.

"We hope with a few different changes we'll be at 7.5 or 8 mpg," Nate says. "That's a big step, and all due to the *mDRIVE* transmission and the aerodynamics of the Mack Anthem." Nate is also interested to see how Mack's energy recovery technology in the MP8HE engine could boost fuel economy, and is looking into the feature with its dealer, Brechbuhler Truck Sales.

Energy recovery technology is an advanced feature of the MP8HE engine that captures heat that would otherwise be lost, converts it to mechanical energy and delivers it back to the crankshaft in the form of torque. This

process enables the engine to operate at 1,000-1,100 RPM, saving fuel without sacrificing performance. This downspeeding also reduces operating stress on the engine.

The importance of the data communicated by GuardDog Connect is recognized by management. "This information is much more valuable and detailed than what we get from our other trucks," says Zach, who adds that the information Santmyer receives via GuardDog Connect may enable them to offer more driver behavior incentives.

"There's so much technology in our company now," he says. The biggest challenge is taking all that data and merging it together to make sense of it. Dispatchers have computers and drivers have iPads that run the same platform. ELDs supply more data. And the shop has programs for scheduling maintenance and making sure they have parts. This gives managers greater operational control and facilitates planning.

mDRIVE is another plus for the fleet,

especially the features designed for liquid bulk haulers, which assist in preventing the load from surging inside the tanker. *mDRIVE* also excels with PTO operations, which are critical for tank operations. The trucks rack up 100,000-125,000 miles per year, but also a lot of operating hours running PTOs.

Attracting and retaining drivers is a big issue for Santmyer, as it is for every other fleet. As a hazmat hauler, the challenge is magnified.

"Our insurance requires at least two years' experience in Class A transportation," Zach says. "And even with experienced drivers, it still takes 2-3 months to train them to the petroleum/hazardous aspect of the job."

Top-quality equipment is important for getting and keeping drivers, and keeping them happy.

"Newer equipment, new trucks, new trailers, that really helps with driver morale," Nate says. "The new Sears seat that's featured in the Mack Anthem, it's on the drivers' want list, and to have that in a fleet truck is a plus. And just the layout and the way the dash looks — all the instruments and the gauges — it's just very driver-friendly. They feel at home, if that's the word you want to use for it. It's their daily office."

Safety is enhanced with disc brakes on all wheel ends and by spec'ing the Bendix Wingman Fusion driver assistance system.

The company believes that standardizing equipment contributes to safe operations, as well as efficiency.

"That's why we stick with one brand of truck, because if one driver's truck is getting a repair, the truck that we put them in as a replacement is almost identical — interior-wise, drivability, and automatic transmission," Nate says. The same applies to the tankers, which are all set up the same way.

So Santmyer Transportation has come a long way from its humble beginnings. As Terry Santmyer says, "It was all a big plan. Nothing written down, but you have a vision." ■



Santmyer driver Robert Taylor delivers to a customer's underground storage tank.

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AT WORK

Heavy lifting required



ML Crane Group carries the load with Mack

By Jim McNamara

Photos courtesy of ML Crane Group

ML Crane Group has a simple mission, says the company's president, Scott Wilson: "We lift anything too heavy for you to lift by hand. If you can't figure out how to lift it, how to move it, how to do something with it, we probably can."

Sounds simple, but it requires specialized equipment. ML Crane Group provides crane rental (8.5-ton to 600-ton capacity cranes), specialized rigging, heavy haul, and alternative movement solutions to a wide variety of industries across the United States. While some of the cranes are self-propelled, many travel by truck.

"We're as much a transportation company as we are a crane and rigging company.

We're all driven by DOT road and bridge guidelines. There's only so much weight you can put on a truck, trailer, crane, whatever that rolling device is."

That requires a lot of trucks. Smaller cranes can travel on flatbed or a crane carrier, but once the crane gets larger than 75-ton capacity, it usually has to be divided into components for separate loads. "When you get to the larger mobile cranes, let's say a 275-ton crane, in some places you might have one truck hauling the boom and then four or five other trucks hauling the counterweights and accessories," Wilson says.

"Some of our larger hydraulic cranes require as many as 13 to 20 loads to get a crane to a job site. We actually have some

cranes that take as many as 50 trucks to get the crane to the job site. That's the reason our trucking and trailer fleet has to be so large. Trucks are a large portion of what we do."

In recent years, those trucks have been Mack® Granite® and Mack® Anthem® models. Previously ML Crane Group purchased trucks based on availability and ran a mixed fleet, many of which were used trucks. Recognizing the importance of reliable and durable trucks to the company's operations has led to a more focused approach to fleet operations, Wilson says.

"When ML Crane Group first bought Crane Service in 2007, there was not a fleet plan and trucks were just a necessary evil to get cranes to a job site," Wilson says. "Now, with the fleet size we operate, having a fleet plan is really important."

In addition to hauling cranes, the fleet frequently hauls the oversized and heavy haul loads their customers will want them to install. Up to 40% of the fleet's loads require special permits.

The fleet is currently more than 240 tractors, with Macks comprising more than a quarter and growing. About 80% of the company's 600 employees have a CDL and truck drivers are frequently equipment operators once they reach the job site. "On any given day, we could have as many as 400-500 people driving, whether on a road tractor or mobile crane. And on any given day, we could have as many as 200 trucks on the road."

He describes the fleet's spec as





“We’re as much a transportation company as we are a crane and rigging company. We’re all driven by DOT road and bridge guidelines. There’s only so much weight you can put on a truck, trailer, crane, whatever that rolling device is.”

Scott Wilson, president

“evolution,” meaning they make changes as they learn and gain new experience in areas such as gear ratios, suspensions and automated transmissions.

The number one requirement is durability, he says. “With the local crane trucks, it’s as much off-road as it is on-road. Is the truck going to be durable? Is it going to hold up to being a work truck? We’re not just typical highway miles.”

The company’s many locations each come with a specific set of equipment challenges based on the specialized services required. Beyond what Wilson calls “basic crane service” — air conditioners, signs, general construction — each of the locations is different.

The Southwest region of New Mexico and West Texas primarily deals with energy (oil, gas, power), which means a lot of wind energy and oil facilities. Wind power means transporting the wind generators and assembling the structure, plus sometimes maintaining it. The Mid-Atlantic has a lot of construction, plants and infrastructure projects, and operates a number of tower cranes on large construction sites. Colorado has a mix of energy and large-city construction, while Chicago “has almost all of it, probably the broadest mix of all.”

The number two requirement is service support. The fleet works closely with Albuquerque’s Bruckner Truck Sales, which has helped it develop a Granite tractor spec



modified to meet heavy haul needs. “Mack has had our purchases for the last two and a half years,” he says.

“A good vendor for your business learns your business and helps you make your business profitable and successful. And that’s what we feel like the Bruckner family and (Albuquerque general manager) Evan Smith have done with us.”

Wilson refers to the spec developed for ML Crane Group by Bruckner and Mack customer engineering specialists as a “hybrid heavy-haul/over-the-road truck” and has put a number of them in service now. “The trucks are very highly spec’d out, very well thought out,” he says.

Evan Smith says the Granite tractors come from Mack with factory-installed sleepers, 505 hp Mack MP®8 engines, 14-speed *mDRIVE*™ HD automated manual transmissions, 20,000-pound front and 46,000-pound rear Mack axles, as well as a 20,000-pound liftable pusher axle installed by Mack. The

fleet then installs headache racks, fenders, tool boxes and push/pull connections. The fleet’s Granite straight trucks have 24-foot flatbeds, equipped with a 365 hp MP®7 and a 12-speed *mDRIVE*. The fleet has also purchased Anthem day cab tractors with 455 hp MP8 and 12-speed *mDRIVE*.

For big loads, the fleet operates trucks in tandem — one pushing and one pulling in the lead — which requires constant driver communication to coordinate braking and accelerating.

“Evan and the Bruckner family’s attention to detail for us have kept us purchasing Macks and kept me from even looking at anything else,” Wilson says. “They did a better job servicing our account and making our time valuable to them and giving us back our freedom to run our business.”

“We’ve been really pleased with the trucks Mack’s been producing.” But durability isn’t the only thing they like about their Macks, says Wilson: “The comfort level is unmatched.” ■

APPLICATIONS

Snow kings



Mack[®] Granite[®] snowplows clear the way when the snow flies — lots of snow

By Olivia McMurrey

Photos: Mark Urmos

Plowing snow is a stringent test of a truck's endurance. From pre-treating roads with chemicals to keeping highways open during snowfall and making sure all passages are clear afterward, plow trucks often operate continuously for days or more.

"When snow is forecast, our customers start bringing their guys in and they're working constantly," says Tim Wrinkle, construction product manager for Mack Trucks. "That same truck will work through the various shifts and will just change drivers. They need the truck to be reliable."

The Alaska Department of Transportation entrusts many of the state's vital arteries, including the area in and around Valdez, Alaska, to Mack® Granite® model trucks armed with snowplowing equipment. Valdez is the terminus of the Trans-Alaska Pipeline System. The Richardson Highway is the only road in and out of Valdez, and it traverses Thompson Pass, a region that averages 400 inches of snowfall annually.

"Thompson Pass is the snow capital of Alaska," says Tavis Chaffin, a snowplow operator for the Alaska DOT. "We get more snow up here than anywhere else in the state."

Robert Dunning, district superintendent of the Alaska DOT, says the agency's ability to do its job hinges on operating plow trucks around the clock.

Downtime is not an option. "If we stopped, we would lose our roads," he says. "We have to continuously plow."

"If the road is closed for very long, it starts to really cause some significant issues," says Mark Hanson, station foreman for the Alaska DOT. "Food coming in and out, for instance, and of course you've got the general public. They want to be able to go to Anchorage, they want to be able to go on their vacations, they have flights to catch and their lives to live."

Greg Morrison, sales representative at Mack dealer Construction Machinery Industrial LLC, says Mack has flown plow trucks into remote regions of Alaska. "The

Mack has just proven itself to be one tough truck," Morrison says.

Even in communities and cities that aren't dependent on a single roadway and don't deal with as much snowfall as Valdez, snow-clearing operations are critical, Wrinkle says. "Governments can make or break themselves by how they handle snow storms – how they work to clear the roads for business and for people to get to work or school safely."

Durability, reliability and safety

Because Mack trucks are known for their strength, resilience and safety, it's not surprising municipalities and state transportation departments turn to them – or to contractors who use them – for ice- and snow-clearing operations. The Mack Granite meets the unique challenges of this application in several ways.

Corrosion is a major concern with snowplowing trucks because the salt and chemicals they spread to melt snow and deter ice formation can cause metal components to rust. Mack's treated frame rails and specially designed paint keep road chemicals out, Wrinkle says, and the option of a single frame rail is popular for customers spec'ing the Granite for snowplowing applications. Cleaning salt and chemicals from between double rails can be difficult, so Mack offers a single rail that is thick and strong enough

to meet weight requirements and other rigors of snow- and ice-clearing operations. Wiring harnesses and connectors also are weatherproof.

The plow hoist on Granite models attaches to the truck's parent rail frame extensions, further increasing durability. "That means it's the true rail," Wrinkle says. "Some competitors just have bolt-ons that don't work as well."

When a Granite model is slated for snowplowing operations, Mack applies a particular set of specs, including a heated windshield and mirrors, to improve safety and make the driver's job easier.



"Thompson Pass is the snow capital of Alaska. We get more snow up here than anywhere else in the state."

Tavis Chaffin, snowplow operator for the Alaska DOT

Swiss Army knives of snow plowing

The Mack Granite comes off the assembly line as a versatile workhorse ready for a vast array of chemical-spreading and snowplow setups, which are dictated by customers' regions, the types of roads they plow and the number of lane miles they need to clear in a given time frame.

"Snow is different in Utah than it is in North Carolina," Wrinkle says. And that's true across the country. For example, in higher elevations in the West, snow is drier, while in the central region, it can be an ice and snow mix. Snow packs differently based on moisture level, and that affects clearing methods. Ice removal also requires special techniques.

The Granite is easily upfitted with bodies for spreading salt, brine and other chemicals. Plow options include front plows, wing plows that swing out into an adjacent lane so a truck can clear two lanes at once, and tow plows that also allow a truck to clear an extra lane. Many trucks are equipped with underbody or "belly" plows that are attached beneath the cab and scrape ice off the road surface.

"I jokingly tell the state they turn these things into Swiss Army knives," Morrison says of trucks working on Alaskan highways. "You take a Swiss Army knife and you fold out all the tools that you can use at one time and that's kind of what these trucks look like."

The Granite's versatility also means trucks configured for snowplowing don't have to take a vacation from work when the weather warms. Municipalities and contractors often use them as dump trucks or for spreading gravel or grading road bases.

Increased ground clearance

In 2018, Mack announced a six-inch increase in the Granite Axle Forward model's chassis ride height, providing additional clearance for an underbody scraper. This gives the scraper space to articulate in excess of 45 degrees in both directions, enhancing ice-removal capabilities in winter and road-grading functionality in the offseason.

"The increased ground clearance allows for easier plow installation without the need to move other chassis components like fuel tanks and exhaust aftertreatment systems, saving the customer both time and money," Wrinkle says. "The new configuration also allows for a shorter wheelbase for greater maneuverability and decreased weight, offering customers a cost savings without compromising performance."

APPLICATIONS



Photo: Chris Zona

Easy upfitting

The Granite is also upfitter friendly in that numerous assignable dash switches are provided.

“Plows require a lot of switches inside the cab,” Wrinkle says. “We’re able to accommodate up to eight custom switches in our dash.”

Mack also builds plow trucks with pre-wired electrical connections and dash switches for headlights that mount on the hood, above the front snowplow.

Rightsizing

The Granite can be configured for a wide range of snowplowing jobs, from clearing three lanes with one pass on the nation’s busiest interstate highways to navigating narrow neighborhood streets.

Trucks undertaking the biggest jobs have a 6x4 configuration, their gross vehicle weights can total 110,000 pounds and they also must push the weight of snow covering multiple traffic lanes. “It requires a lot of power,” Wrinkle says.

That muscle is supplied by the Mack MP[®]8 engine, which offers up to 505 horsepower and up to 1,860 lb.-ft. of torque. This power runs through Mack *mDRIVE*[™] automated transmissions, so the driver doesn’t have to worry about shifting and can concentrate on driving.

On the other end of the spectrum, the Mack Granite Medium Heavy Duty (MHD) model is available in a 4x2 configuration with a Cummins L9 engine that features a lower 330 horsepower option. The Granite MHD provides a lighter, more maneuverable and fuel-efficient option that is a better fit for some small municipalities.

Where’s my snowplow?

Innovative Mack technology is ideally suited for the snowplowing application. Mack[®] Over The Air delivers software updates and



The Granite can be equally at ease plowing rural roads and interstate highways. ABOVE: Upfitters can equip Mack Granite models with front plows, wing plows that swing into an adjacent lane and belly plows for scraping roadway ice.

vehicle-parameter changes anywhere in the United States and Canada where a cellular connection is available. This makes many trips to service centers unnecessary and significantly increases uptime, which is vital for plow trucks. Because software updates take less than 20 minutes and parameter updates take less than 10 minutes, they can be performed while a driver is parked for lunch or at the home location.

Mack GuardDog[®] Connect telematics hardware enables Over The Air updates. GuardDog Connect also offers proactive monitoring and repair planning, allowing real-time diagnoses, repair scheduling and confirmation parts are in stock.

Wrinkle says in addition to taking advantage of these capabilities, some snowplow truck owners, including the Pennsylvania Department of Transportation, are using the telematics system to help plan their routes and let customers know where trucks are and which roads are clear.

“They’re pinging the trucks every 60 seconds and using a website to let the

public know what roads are being plowed,” Wrinkle says. “It’s pretty high tech, and that kind of transparency and communication is catching on.”

The Alaska Department of Transportation is using GPS data and even more complex technology by a company called MTI to operate its plow trucks in “white-out” conditions. When the world beyond the cab is completely obscured by snow, drivers still can plow their routes by looking at a screen that shows the truck’s location in relation to roadway center and side lines, guardrails, areas where vehicles can enter and exit traffic lanes and more.

“All these features are showing up in real time on the screen within a few centimeters of accuracy,” Hanson says. “It’s almost like a video game. So now if I’m in a white out, I know where I am on the road. If I travel over the center line, it turns red. If I get too far to the right, start going over the fog line, the fog line turns red. So it really helps you to not only have the security of knowing where you are on the road, but you plow straighter.” ■



Keeping America clean: The evolution of the waste industry

Republic Services and Mack Trucks Historical Museum honor refuse industry with new exhibit

By Kevin Williams

A fascination with trash and trash removal collection has visitors flocking to see the history of waste removal on full display at the Mack Trucks Historical Museum's Refuse exhibit.

The new exhibit, which features three antique Mack® trucks and an interactive display, was made possible by support from Mack Trucks and Republic Services, an industry leader in recycling and waste disposal.

Republic Services provided the three classic Mack models for use in the new exhibit. The Mack models on display include a 1929 Mack AK model with hoist and dump body, a

1951 Mack LF model with a Heil Colecto-Pak body, and a 1965 Mack B53S model with a Dempster Dumpster body. Republic Services also helped develop the exhibit's interactive displays and refuse industry timeline wall.

People have always felt a connection to trash and that has made the refuse exhibit at the museum such a success, says Doug Maney, curator of the Mack Trucks Historical Museum in Allentown, Pennsylvania. Maney credits the refuse exhibit, officially known as "Keeping America Clean," with raising museum attendance by 20% this summer.

"It's been very well-received. Our visitors are Mack customers who are in different

locations. Some of the first customers to come through were employees from another waste collection company, and they were impressed. They said they learned things about their own industry they didn't know," Maney says, adding that the exhibit appeals to a blend of industry veterans and the general public.

However, those in the refuse industry business prefer to call it refuse or waste management rather than "garbage." And it's not simple semantics driving the change in language; it's that the "garbage truck" is no longer just about garbage.

"It's not just the derogatory connotations of garbage, it's that the move to recycling has almost split the refuse industry in half. The bulk of what we dispose of now is packaging, which can be recycled for the most part, and the rest has to be disposed of," Maney says.

From horses to high tech

One of the exhibit's most popular components chronicles the history of collection by delving into how Mack refuse vehicles have evolved over time.

"The earliest refuse vehicles were horse-drawn wagons that cleaned up horse-waste on the streets and ashes from cooking and heating. Everyone had ashes."

Doug Maney, curator of the Mack Trucks Historical Museum

TAILLIGHTS



The 1952 LFTD with Heil Colecto-Pak refuse body is equipped with air brakes, a 5-speed transmission and a 6-cylinder gas engine capable of up to 158 horsepower.

“The earliest refuse vehicles were horse-drawn wagons that cleaned up horse-waste on the streets and ashes from cooking and heating. Everyone had ashes,” Maney says.

But as horses gave way to cars, horse-drawn garbage carts were replaced by rudimentary “garbage trucks” — back then, that term would have been accurate as the emphasis was on waste disposal.

Republic has restored several of its legacy company antique collection trucks that capture the evolution of curbside collection, and these are the centerpieces of the exhibit.

Last year, Republic approached Mack Trucks with the idea of using the vintage vehicles in an exhibit.

“Republic is one of Mack’s largest customers, and they had these three restored vehicles that were stored away and weren’t getting the exposure that they should, so Don Slager, CEO of Republic, thought there would be no better place for these vehicles to be put on display,” Maney says. Republic has a fleet of approximately 16,000 Mack trucks.



The museum’s 1929 AK has a Mack 4-yard dump body and a 4-cylinder gas engine producing 75 horsepower. Originally outfitted with gas lights and solid tires, it now has electric lights and pneumatic tires.

“Slager is such a supporter and advocate of the Mack brand that he chose to donate these three trucks to the museum to preserve the heritage of both companies,” Maney says.

“Republic’s antique trucks are the perfect fit for telling that story, a way to showcase the antique trucks and preserve a bit of history. The Mack Museum created an exhibit that tells the story of how far the industry, the companies, and technology have come in the last century,” Republic Services told *Bulldog* magazine.

Changing waste, changing trucks

“The evolution of waste really drove the evolution of the vehicles that were used. The early days were spent collecting ash, where you would grab buckets of ash and empty them into an open-bodied dump truck. These dump trucks were the first ash and rubbish collection vehicles,” Maney says, adding that “as the rubbish changed [to food waste], enclosed bodies came along.” He describes them as dump bodies resembling a dumpster on wheels with flip lids to keep loose debris from flying out and to contain odor.

Fast-forward to today and the emphasis on waste management has shifted sharply to recycling. One section of the exhibit highlights recycling using videos and interactives that promote and educate about recycling and proper placement of recycling materials. You can, by the way, recycle pizza boxes as long as they don’t have grease soaked in, one of many things Maney said the exhibit taught him about recycling.

“Clean out containers, make sure there is no peanut butter or mayo in the jar,” Maney says, adding that the sorting process that recyclables go through is fascinating. For instance, often, cans, cardboard and paper are sorted out by air, which blasts the cardboard and paper out as an easy means of separation.

And, according to Republic Services, the advancements are only going to continue. Earlier this year, Republic announced a partnership with Mack to test a fully electric Mack® LR refuse truck to help the fleet achieve zero emissions goals. Yet another way to keep America clean. ■



This 1965 B53S with Dempster Dumpster body has a 6-cylinder diesel engine with an 18-speed manual transmission producing up to 158 horsepower.



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March 10 - 14	ConExpo-ConAgg	Las Vegas, NV
March 29 - April 1	TRALA	Bonita Springs, FL
April 16 - 18	Truck World	Toronto, ON
April 26 - 28	NPTC	Cincinnati, OH
May 3 - 5	NTTC	Washington, DC
May 5 - 7	Waste Expo	New Orleans, LA
May 12 - 13	ACT Expo	Long Beach, CA
September 27 - 29	NRMCA Concrete Works	Aurora, CO
September (date TBD)	Tank Truck Week	TBD
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