

Evolving Trailer Technology



V17 • 2



Thermal Efficiency and the FSMA

New laws for transporting temperature-sensitive loads in sight

The Future is Now

Exploring the future of transportation technology




Stretching the Limits

Are 33-ft pups in your future?



2015 Events Calendar

-  Great Dane Event
-  Johnson Refrigerated Truck Bodies Event

September

-  September 15-18
International Dairy Show
Chicago, IL
-  September 20-22
Women in Trucking Accelerate!
Conference and Expo
Dallas, TX
-  September 26-27
West American Truck Show
Fresno, CA

October

-  October 7-9
Colfecar
Cartagena, Columbia
-  October 8-10
National Truck & Heavy Equipment Claims Council
Minneapolis, MN
-  October 26-28
International Foodservice Distribution
Solutions Conference
Phoenix, AZ

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Creative Problem Solving Delivers a Best-in-Class Customer Experience

Dear Customer,

It's no secret that to achieve and maintain a position of leadership requires a certain ability to adapt, but also a desire to proactively transform the industry. That's why shaping the future of transportation with collaboration and creative problem solving is at the heart of Great Dane's mission to deliver a best-in-class customer experience.

Great Dane knows their customers have cargo they need delivered successfully and safely. In this issue of Evolving Trailer Technology, we highlight changes in the industry due to upcoming requirements from the Food Safety Modernization Act as well as our thoughts on why flatbed fleets are migrating to all-aluminum products at a higher rate than ever before.

We tell the story of one customer who has worked with Great Dane to keep their transportation practices cutting-edge and efficient with modern technology all while seeing a significant ROI by maintaining a set depreciation cycle.

Also profiled is another customer who works closely with Great Dane to spec their trailers so that their drivers spend more time driving, and their customers spend less time waiting for their deliveries.

Providing our customers with the most advanced technology and quality products is a commitment we take very seriously. Through Evolving Trailer Technology, we also work to keep you informed of important industry trends while giving you a glimpse into other fleet's best practices. We hope you find this publication useful and welcome your comments at any time.

Regards,

Brandie M. Fuller
Vice President, Marketing
Great Dane



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*Evolving Trailer Technology is published by
Great Dane.*



THE FUTURE IS NOW

All the recent buzz about autonomous trucks makes for some fun speculation on what tractor-trailers will look like in the future. Just for clarification, while the term “autonomous” suggests that these rigs are going to drive themselves, they really should be considered “self-directed” vehicles. The onboard technology—not only makes these units smart enough to sense and react to roads and traffic, but also makes them fuel efficient and more productive.

Daimler Trucks North America recently unveiled the Freightliner Inspiration Truck, which is comprised of a variety of advanced onboard technology systems from sensors that monitor movement around the vehicle and communicate and/or adjust or activate vehicle components—such as engine downspeeding, collision avoidance actions and braking, and more, all executed during driving.

Volvo Trucks of North America has discussed its future products, which include a look at a possible “semi-autonomous” design for which trailers may take on a whole new role. The company is currently exploring platooning-type technology whereby a series of two or more trailers would be “wirelessly” tethered to a tractor and have the ability to slip in and out of service (disconnect and reconnect) along the route making deliveries at designated warehouse points (infrastructure for this type of service is yet to be designed). The trailers would be wired and programmed to reach their loading and unloading areas to deliver or pick up cargo before rejoining the platoon. This parallels current warehousing practices where unattended conveyances travel the aisles to pick and/or stock shelves.

Last year Great Dane revealed, along with partners Walmart, Peterbilt, and Capstone Turbine, the Walmart Advanced Vehicle Experience which showcased the latest in trailer technology including a body built extensively from carbon fiber, including one-piece carbon fiber panels for roof and sidewalls, saving nearly 4000 lbs. compared to a traditional design. The trailer’s convex nose also improves aerodynamics while enhancing storage space inside the trailer.

While fleet efficiency is top-of-mind for Great Dane, the company is also focused on innovations towards telematics, safety, aerodynamics and lightweight design.

Charlie Fetz, Vice President of Design and Development at Great Dane says, “The biggest challenge is evaluating and determining which enhancements provide significant ROI for our customers rather than chasing the latest advancements.”

So while innovation is critical and being customer-focused will help companies prioritize and steer where the industry is headed, it’s important to not get too distracted with “shiny object syndrome.”

Nevertheless Fetz agrees that with changing industry regulations change is inevitable, “We’ve always designed our trailers to respond to the specific needs of our customers, so incorporating current customer preferences into evolving technologies is our priority.” 🚛

Stretching the Limits

Are 33-ft pups in your future?




As freight demands increase over the coming years, we will see a greater need for trailers to efficiently handle more loads. Recently, some major carriers have been lobbying for increased trailer capacity and, interestingly enough, that request is not about taking on heavier loads, but rather increasing the length of trailers with the addition of 33-foot pup trailers. This seems to be a reasonable request given the fact that pup trailers often carry relatively lighter weight goods and cube out before they reach the weight limits. One carrier reports that the new configuration could increase its capacity by approximately 18 percent.

The Federal Highway Administrations predicts that long-haul (more than 50 mile trips) truck traffic will double by the year 2035 from 2010 levels, and fleets turning to 33-foot pups may indeed be the solution to cut down on some of this traffic. Part of the acceptance of the change comes from the determination that the addition of pups will not excessively increase wear or damage to the nation's existing highways—a concern that has been under debate.

The concept of adding 33-foot pup trailers certainly has strong appeal for those fleets that need to meet the increasing demand for freight. The pups, which boost shipping efficiency, may well be the best solution to the growing freight demand projected over the next 20 years.

Stretching 28' Pups

The industry is expecting the 33-ft pup law to pass in 2016, but that remains to be seen. One challenge is that due to trailer manufacturer capacity constraints—a result of the recent recession, replacement cycle purchases coupled with higher freight demands—the market is at full capacity. However, while trailer manufacturers may be challenged to build enough trailers to meet current demand, they can stretch new and existing ones. Great Dane is ready for the upcoming changes and is equipped with the largest retail network in the industry to stretch your 28' dry vans. For more information, call your nearest Great Dane location. 

Win-Win Strategies

Tribe specs Great Dane trailers to benefit their customers, their drivers, and their fleet



Founded in 2005, Tribe is one of the fastest growing minority-owned carriers in North America. Outfitted with state-of-the-art equipment, specializing in deep-frozen and temperature-controlled transportation, the company is committed to its strong customer relationships, cutting-edge technology, and savvy business strategies. Because of its heritage and beliefs, Tribe has a strong commitment to improving the quality of life for all people through economic, social, and environmental sustainability.

According to Matt Handte, Executive Vice President, "Tribe, from its inception, moved from a vision of its business to the reality of putting revenue-producing equipment on the road through our partnership with Great Dane. We believe Great Dane manufactures one of the best reefer trailers available in the market today. All of our first generation trailers are still on the road producing revenue and working as flawlessly as the 2016 model-year trailers we are putting in service and out on the road today."


TRIBE TRANSPORTATION

A NATIVE AMERICAN WOMAN OWNED BUSINESS

“Overall, our partnership experience with Great Dane has been outstanding from ordering, production, scheduling, delivery and equipment performance.”

*Matt Handte,
Executive Vice President, Tribe Transportation*

Partnering Strategies



Part of Tribe’s strategy of doing business is partnering with a single-source supplier to minimize total cost and improve overall quality, and they have established that partnership with Great Dane and continue to build that relationship through their local retail location. Handte reports that Tribe is approaching 400 trailers in 2015 and, as the company moves to close out its calendar year, will have 155 additional trailers already on order for next year, which will increase their trailer fleet to 555 Great Danes.

Realizing ROI

“The fit, finish, durability and low maintenance costs for us means less down time and greater utilization for revenue production, which would improve anyone’s ROI,” says Handte. “The way we spec our trailers also allows us to be more efficient than the competition because we can pre-cool faster and hold our deep frozen air to meet our customer’s requirements. It also

benefits our drivers who now spend less time waiting to pre-cool and more time driving—so they earn more money. It’s a win-win for our customers, our drivers, and our fleet.”

He goes on to say that the company has also partnered with Great Dane to improve the overall fuel economy of trailers by reducing aerodynamic drag, which was a result of studies the fleet had performed on its equipment. “Great Dane was willing to partner with us and has made these changes based on our findings.”

“Overall, our partnership experience with Great Dane has been outstanding from ordering, production, scheduling, delivery, and equipment performance,” Handte adds. “There are many reasons we choose Great Dane as a partner, which includes their dependability, quality and reliability of their product along with our relationship and their unique understanding of our needs. We are proud to be associated and partnered with Great Dane.” 🇺🇸

The Switch is On

Flatbed carriers are gravitating to aluminum trailers

Did you know that aluminum flatbed trailers currently make up about 40 percent of the 30,000-flatbed trailer market today? That number is growing and there are some fairly significant reasons why interest in aluminum construction is increasing. Great Dane has noticed that combo and steel flatbed carriers are switching to all-aluminum to handle increased payloads along with many other practical reasons to make the switch.

What's the big appeal?

Carriers are finding out that aluminum flatbed trailers offer a number of benefits that can make them an ideal choice. Due to current regulations, today's trucks are heavier, which makes the lighter weight of aluminum flatbeds more appealing. With the weight reduction of aluminum construction, payload can increase without overloading. The weight savings of the aluminum construction also allows for the trailer length to be increased —from 48-feet to 53-feet—without gaining weight compared to a 48-foot combo flatbed. In addition, the aluminum construction lowers the potential for trailer corrosion. There are also the aesthetics to consider. Aluminum trailers just look better and have a more modern look that fleets like to project. This is a particular benefit to a public company that may want to attract investors. So while many are seeing the advantage to running all-aluminum flatbed trailers, sometimes it doesn't make sense for all fleets and all loads. Great Dane prides itself on being a flatbed company that has something for everyone, and understands there's no such thing as one-size fits all.

The Great Dane Advantage

Looking to make the switch? As you do your research, consider Great Dane's proven history of successful products, which includes the advanced technology and design of its high-performance Freedom XP aluminum flatbed trailer. This trailer combines lightweight construction with lightweight components to give customers a flatbed trailer long on performance. 🚛





The Perfect Fit

JRTB and Thermo King Unit match up like a hand in a glove

Truck Refrigeration Repair, a Thermo King dealer based in Norfolk, Va., is the largest rental/lease fleet in the Tidewater Virginia area. The company, which has been in business for nearly 25 years, not only is a full service repair, paint and parts facility, but also has a rental fleet business consisting of reefer trailers, dry vans, flatbeds and reefer containers.

According to President of Truck Refrigeration Repair, Ronnie Capps, "My experience with Great Dane and Johnson Refrigerated Truck Bodies (JRTB) was excellent. Everything went according to the schedule I was given. Truck Refrigeration Repair was able to execute our plan and the customers' expectations were exceeded."

He goes on to say, "My function was to execute a plan to exceed a customer's expectations and was pleasantly surprised with the JRTB Alpine. The Thermo King TS Unit I needed to mount lined up perfectly with the bolt pattern of the Alpine body. The body lined up with the chassis and allowed for easy mounting without U-bolts. The customer immediately noticed how straight the walls were constructed, which is a sign of good construction. My customer's initial comment was on how sturdy the construction of the body

looked. I knew that the Alpine was a solid reefer body because the reefer unit that we installed took three hours less install time than what was typical and the unit 'fit like a glove' when it was attached."

Why Truck Refrigeration Repair Recommends the Alpine

"I would recommend the Alpine to fleets for several reasons. The body construction is solid and extremely durable. The Thermo King unit slipped right into the frame with flawless alignment to the bolt pattern, which provided a solid installation. The body tie-down system matched the chassis perfectly for an almost effortless installation. Eliminating the U-bolts means there is less maintenance and improves long-term reliability." 🚚

Proud History, Great Reputation



In 1930, with a goal to provide “good merchandise, appreciative service and low prices,” Charles Hyde and David Vredenburg opened a small store in Beaconsfield, Iowa, which grew to become Hy-Vee—a grocery company known for exactly what they set out to achieve: excellent service and reasonable prices. It is now an employee-owned company, which encourages each of its more than 75,000 employees to help guide the company. Today, Hy-Vee is synonymous with quality, variety, value and superior customer service.

In the last 85 years, the way the company transports its products has evolved. According to Chad Masters, truck shop manager, “The fleet has gone from 40-foot stainless ribbed-sided, spring-ride heavy trailers to 53-foot by 102-inch-wide smooth aluminum-sided Great Dane Everest refrigerated trailers and Champion dry vans with air ride suspension, which are more aerodynamic. The reefers also have dual and triple evaporators. Separate units allow us to divide a trailer so we can have multiple temperatures inside the trailer to allow us to combine frozen/grocery on the same trailer with chutes and bulkheads.” He also says that the key features include an insulation package, rear door seals, high-scuff bands and durable PunctureGuard lining. For van trailers, the translucent roofs with the logistic post and SSL lining are key.”

The fleet’s return on investment (ROI) strategy includes a six-year depreciation cycle. The company



“We have tried several other brands but Great Dane trailers fit our business model.”

*Jim Moore,
Group VP Transportation & Warehousing*

replaces reefers every eight years and the vans every 12 years. “There are a lot of the little special features on the Great Dane trailers that make them our number one choice for our business,” says Jim Moore, Group VP Transportation and Warehousing, “We have tried several other brands, but Great Dane trailers fit our business model.”

Dealer Support

Hy-Vee relies on its Great Dane retail location for help specifying and maintaining the trailers. Moore states, “Our Great Dane dealership, Jim Hawk Truck Trailers, has been a great partner, meeting our needs from timely delivery of the new product, ready to be put into service when it arrives, to handling all of our warranty needs. They understand our business needs and keep us informed of changes that we can benefit from.”

According to Moore, “We have grown our fleet to over 250 reefer trailers and 250 dry vans. Our fleet delivers produce, frozen and general, merchandise and dry grocery and specialty foods across an eight state area in the Midwest. Great Dane has been a good partner, helping us replace equipment as needed and has been hands-on with new equipment needs. The quality of the Great Dane products, combined with the incredible technicians/mechanics in our own company truck shops, we get the maximum life cycle out of every piece of equipment in our fleet. In addition, if we have a problem it is taken care of in a timely manner.” 🚛



Thermal Efficiency and the FSMA

Stringent new laws for transporting perishable foods enacted

The final provisions of the Food and Drug Administration Food Safety Modernization Act (FSMA) legislation embody changes that could pose some of the most demanding compliance requirements on the food and food transportation industries starting this year with more regulations slated to be finalized in 2016. The FSMA law, which was signed into effect by President Obama in 2011, has been implemented in sections over the past four years. As the law goes into effect all U.S. food companies will be expected to comply within five years of final rule deadlines.

Sanitary Food Controls & Transportation Rule

The first phase to be implemented is the Preventive Controls for Animal Food and Preventive Controls for Human Food, which provides specifics of product testing and environmental monitoring. Companies need to update existing Hazard Analysis and Critical Control Points (HACCP) plans to account for all the hazards identified in the new law. The next focus is the Sanitary Transportation Rule, which requires sanitary practices

for food transport. The implications for the truck transportation industry include ensuring that these perishable foods are not only transported at correct and consistent temperatures, as established by the product manufacturers and/or shippers, but also that those temperatures are recorded and can be verified by carriers.

Ensuring Thermal Efficiency

Maintaining the proper temperature during transport is crucial—and so is maintaining thermal efficiency of the transportation equipment over its useful life. While the onus is on the carriers to follow the regulations imposed by the FSMA, trailer manufacturers work closely with their customers to give shippers and carriers the best equipment to meet their needs. Trailers need to be well insulated, but not heavy. Often moisture intrusion in the insulation has added weight to the trailer and compromised thermal efficiency. The inevitable aging of the foam as the trailer got older led to a less thermally efficient trailer that could no longer maintain temperature.



Great Dane engineers have helped to solve these problems with advanced linings such as ThermoGuard. ThermoGuard helps resist moisture intrusion and resist loss of efficiency due to foam outgassing. Furthermore thermal efficiency is enhanced with Great Dane's modular panel foaming process that provides a more thermally consistent insulation.

In addition to ThermoGuard, Great Dane also employs other construction methods to help maintain thermal efficiency. The use of wood has been eliminated from refrigerated trailers, because wood acts as a wick that absorbs moisture. Great Dane has replaced the wood with composite material. Additionally, Great Dane uses adhesives to help reduce the need for fasteners.

Helping to ensure thermal efficiency for the life of the trailer is, and has always been Great Dane's goal. While regulations and laws may change and evolve, Great Dane trailers are ready to support shippers and carriers in FSMA compliance. 🇺🇸


Putting On the Brakes

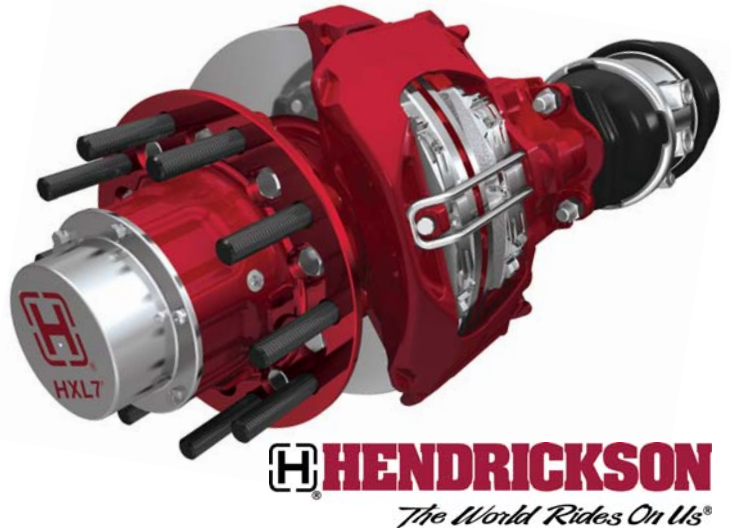
Dressing out wheel ends for superior performance

Looking for a trailer brake and wheel end combination that provides superior performance? Hendrickson and WABCO offer the perfect package.

The Hendrickson MAXX22T air disc brake system is optimized specifically for trailer applications. It aligns with the braking requirements of North American tractor-trailer combinations. The braking system combines WABCO's bi-directional single piston design with Hendrickson's wheel end and brake components for higher reliability, reduced weight and installation efficiency.

Available on Great Dane trailers, the MAXX22T system features a bolt-on splashguard for easier installation and maintenance. Adding to the value is the fact that it is corrosion resistant. In addition, the design allows for simplified rotor inspection. MAXX22T air disc brakes are rated

up to a 23,000 lbs. gross-axle weight with tires up to 19.3-in tire static loaded radius (SLR) and at 20,000 lbs. for tires up to 20.8-in. SLR. 




Reducing Rollover Risk

More and more fleets are examining the advantages of trailer roll stability control systems. The risk of rollover from driving actions, including collision avoidance maneuvers, sudden lane changes and acceleration in a curve can be mitigated as a result of Meritor WABCO's Roll Stability Support (RSS) system. The system automatically accounts for the trailer load and works with the braking components to reduce the likelihood of a rollover.

Meritor WABCO's two-sensor, one-modulator RSS 1M is the preferred standard on all Great Dane trailers. Features include: non-sustained wheel lock for smooth trailer control during a stability control event; standard blink code diagnostics to determine if an illuminated ABS indicator lamp is caused by a sensor-based or ECU-based fault.



In addition, fleets can purchase new trailers with Meritor WABCO RSS or may also wish to retrofit existing trailers in their fleet. Meritor WABCO offers retrofit kits for most trailer applications. Great Dane's retail network of aftermarket parts and service locations can supply retrofit kits as well as installation services. 

Top 5 Summer Weather Trailer Maintenance Checks

1. Proper tire inflation

Summer weather can be hard on tires since tread wear is more rapid during summer months. You can maximize tire life by maintaining proper air pressure on trailer tires. The inside dual trailer tires, which are the least maintained tires on the vehicle, will need special attention. Make sure all tires are checked regularly with a properly calibrated air pressure gauge and that there are no cuts, punctures or broken/missing valve core stems.

2. Inspect and reseal roof sheet

Trailer roofs are constantly exposed to weather extremes. Summer sunshine is hot and under the glare of the sun, sealants may show signs of degradation due to heat. Roof sheet sealant is a maintenance item that needs to be inspected and reapplied when needed to prevent water intrusion. Make sure all roof sheet sections are checked and maintained to avoid problems.

3. Inspect undercoating on wood floors

Wooden trailer floors are subjected to all kinds of bad weather and undercoatings are exposed to road water and debris. Especially during the summer rainy season, water can penetrate through a wood floor causing damage. Reapplying undercoatings can restore protection.

4. Inspect door seals & gaskets

Cargo protection is important and that means keeping summer rain out at all times. To help prevent rainwater from seeping through doors, inspect all seals for damage often and repair or replace seals and gaskets as needed.

5. Check wheel ends for contamination

Heavy summer rains can damage wheel ends if it is allowed to seep in through the hubcaps. Ensure that all the hubcaps on trailer wheels are checked frequently during the summer months. Make sure they have proper lubrication and that there are no signs of water contamination. 🚫



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