

# *Evolving Trailer* *Technology*

V14 • 1



## **Setting Higher Standards**

All-new rear frame design offers corrosion resistance

## **Put to the Test**

Independent third party evaluations prove ThermoGuard's superior value

## **Fighting Corrosion**

A new comprehensive solution for floors

# 2012 Events Calendar

## March

March 22-24

MATS – Mid-America Trucking Show

## April

April 15-22

TTMA – Truck Trailer Manufacturers Association

April 19-21

Truck World

April 29 – May 1

NPTC – National Private Truck Council Annual Conference & Exhibition

## June

June 21-23

The Great West Truck Show

## July

July 11-13

TCA – Refrigerated Division Annual Meeting

## August

August 22-24

GATS - Great American Trucking Show

## September

September 20-22

TRUXPO

September 26-28

NDTA – National Trailer Dealers Association Annual Convention

## October

October 7-10

ATA - American Trucking Association Management Conference & Exhibition

October 29-31

IFDA – International Food Distribution Association

## November

November 2-4

Cam Expo



## Revolutionary Changes Keep Innovation and Quality at the Forefront

Dear Customer,

At Great Dane, offering the most innovative, industry-best trucking solutions to drive your business forward is our commitment. This same dedication of superior quality is reflected in Great Dane's all-new, best-ever line of American-made trailers. Re-engineered to deliver the best results for your business, the Everest, Champion and Freedom series are here to meet your demands.

In this issue of Evolving Trailer Technology, you will learn how Great Dane is setting the benchmark for quality with its revolutionary changes and all-new, streamlined product mix. Each line incorporates the latest industry-best innovations as standard and has been intentionally designed to better meet the ever-changing demands of customers.

For over a century long, Great Dane has provided customers with superior products to help their businesses succeed. In this issue, a refrigerated hauler shares how Great Dane's reefers help deliver excellent service to their customers and a truckload carrier explains the high level of reliability and dependability that Great Dane dry vans have provided for over two decades for their business.

Driven to provide your company with the best and most innovative products, we strive to continue to meet your trucking demands for the long haul. Thank you for your business!

Regards,

Brandie M. Fuller  
Vice President, Marketing  
Great Dane Trailers



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## Comments for the editor?

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# DRIVING IN EVOLUTION

## THERE ARE NO SHORTCUTS



*From Bill Crown,  
President and CEO,  
Great Dane Trailers*

It goes without saying that the past few years have been filled with tremendous change. The U.S. economy and political scene have been wrought with ups and downs. The trucking industry, in particular, has been significantly impacted by regulatory

changes handed down by lawmakers. These factors, along with a multitude of others, create a looming uncertainty about the future.

Instead of allowing today's circumstances determine our path, Great Dane has opted to boldly forge ahead; to gallantly accept the challenges we face and create an opportunity to revolutionize the trucking industry; to redefine standards for business partnership and raise the bar for quality craftsmanship, sales performance and exemplary service.

As a pioneer of our trade, Great Dane has always delivered innovative products. Our trailers and our people have set the benchmark

for quality for nearly a century. Over that time our customers have been our driving force, so we've constantly challenged ourselves to be even better. We've leveraged experience, ingenuity and our own advances in technology to stay ahead of the needs of the trucking industry. As part of our long-term commitment to delivering the world's best trailers and in response to the ever-changing requirements of our customers, we at Great Dane are thrilled to reveal some exciting changes that are at the heart of our company's evolution. They are the culmination of 100 years of research, engineering and the pursuit of excellence in our field.

Over the past year or so, our sales team has worked tirelessly with our engineering and manufacturing groups to not only streamline our products but to incorporate the very latest high-tech innovations into our base models. The result is an all-new, completely redesigned core product lineup that includes Everest refrigerated trailers, Champion dry vans and Freedom flatbeds. Each series consists of three models to meet a variety of target markets and a wide range of specifications. You will learn more about what makes these new trailers so unique, the new standards for each and how they will improve your bottom line in this issue of Evolving Trailer Technology.

Great Dane's transformation extends outside the box, with an updated look for the corporate image. While our products were being re-engineered, our marketing department was hard at work rejuvenating the appearance of our trailers and our brand, which are now



*Great Dane*

# ON

sleeker and more modern. The iconic chrome dog and red oval logo received a makeover with the addition of a reflective background and polished chrome rim. All trailers, regardless of model, will now be adorned with a redesigned red wing plate, and the modern red oval will garnish the rear doors of refrigerated and dry van trailers in lieu of a parallelogram. The all-red markings honor the history of the brand, which has been red since 1951.

Meanwhile, Great Dane's aftermarket parts department has just launched Emergency Road Service (ERS) available 24 hours a day, seven days a week exclusively for AdvantEDGE customers. AdvantEDGE, Great Dane's popular National Accounts Parts and Service program introduced just over a year ago, connects customers with cost-effective, streamlined access to parts and service at more than 100 participating Great Dane distributors throughout North America. AdvantEDGE has no enrollment fees, but does offer users a single point-of-contact, consolidated invoicing, consistent parts pricing, standardized labor times, and customizable purchasing controls. Services included in the new emergency component of

the program include towing, trailer and tractor repair, maintenance on reefer units and tires, and drop-lot facilities.

Great Dane is proud of its history as the industry leader in innovation and plans to continue its legacy as the unrivaled worldwide leader in trailer manufacturing, sales and service. More revolutionary changes will be announced in the coming months. Find out more about them in the next issues of *Evolving Trailer Technology*, our website, [www.greatdanetrailers.com](http://www.greatdanetrailers.com) and Twitter, [@\\_greatdane](https://twitter.com/_greatdane).

A pinnacle of strength, the Everest line of Great Dane reefers provide maximum benefits— with top-grade construction and the best new technology.

Designed for a variety of refrigerated trucking operations, the line of Great Dane Everest reefers incorporates design features aimed at providing exceptional cargo protection, reducing weight and lowering maintenance costs.

Everest reefers are built from front to back with strength in mind. Extruded aluminum Z-post uprights support fully welded aluminum refrigeration unit bracing in the front wall, eliminating the use of dissimilar metals to significantly cut the chance of galvanic corrosion.

Wall panels for Everest reefers are constructed in a temperature regulated press using a computer-controlled urethane injection process that insulates components, producing flat linings and skin with void-free foam for maximum thermal efficiency.

An aluminum roof manufactured using a patented corrugation process is standard in Everest reefers, adding stiffness to the structure and controlling thermal expansion and minimizing the potential for delamination from the insulation.

Rear frames constructed of satin-finish stainless steel are used on Everest reefers for maximum strength and minimum maintenance. Resistance to corrosion and the overall enhanced appearance of stainless steel also increases resale value.

All aluminum doors on Everest models are completely sealed, inside and out, to eliminate moisture intrusion into the insulation. A unique gasket design uses a dual-lip outer seal and a separate inner compression seal to lock in refrigerated air. All rear door hardware is installed with stainless steel bolts. Lock rods are galvanized steel and incorporate anti-seize bushings between the lock rod tube and the bearing plates to ensure smooth operation.

Great Dane's reefer floor system combines the industry's highest floor rating with the strongest support features. The aluminum duct floor is robotically welded full length to seal out all moisture. The floor's insulation is further protected from external moisture by a one-piece thermoplastic sub pan that is extremely impact resistant. Employing Magni-coated fasteners to install the floor and full width composite floor sills, which are located over each crossmember for extra support, also enhances corrosion protection. Composite sills also lessen the chance of weld breaks caused when wood sills are crushed or deteriorate due to moisture.

Everest reefer models are equipped with Grote MicroNova DOT LED lamps, designed to improve visibility and service life. Also standard is the industry's best wiring harness. The fully modular Great Dane Long Life Light System is a maintenance-free solution backed by a ten-year warranty. This sealed harness prevents moisture intru-

# EVEREST

## REEFERS



sion, is extremely durable, and combines the flexibility of a custom wiring system with the reliability and simplicity of a sealed harness.

Great Dane offers the latest advancements in all LED interior lighting in Everest reefers for better performance, greater illumination and ease of replacement.

Great Dane's complete package of comprehensive corrosion prevention solutions are available on Everest reefers. A key component of this package is Great Dane's exclusive corrosion protection, CorroGuard, a superior trailer undercoating that was developed specifically for trailer underbody protection from rock and stone impingement and chemical resistance to current de-icing chemicals and road hazards.

Everest reefers can be enhanced with special packages, including a Meat Railer Package that is designed for suspended load applications of up to 40,000 lbs, a tridem axle configuration and air-ride suspension package for operations where weight laws permit added payload through weight distribution, and a widespread tandem axle configuration with an air-ride suspension that allows for an increase in per axle weight providing flexibility of load placement.

Great Dane's reputation as the industry leader in reefer innovation is firmly in place in the line of Everest Reefers, including Everest TL, Everest SS and Everest CL models for long-haul truckload customers, specialized haulers and multi-temp carriers. 🇺🇸

## Thin, But Thermal

Great Dane's high performance reefer linings, PunctureGuard and ThermoGuard, are advanced solutions superior to all other options currently available. At .070 inches, PunctureGuard is incredibly thin and lightweight, yet extremely puncture resistant for extra protection against the daily wear and tear on a trailer's interior walls. ThermoGuard, which shares the same properties, includes a patented design that helps maintain the thermal efficiency of Everest reefers by employing a revolutionary composite layer that seals the trailer's insulation and significantly reduces "out gassing" that causes foam insulation to degrade over time.

PunctureGuard and ThermoGuard also address the need for stiffness to protect the foam insulation in a trailer's walls with a high glass content and its placement in the glass-reinforced, thermoplastic liners. Adhesion characteristics are addressed in the design of Great Dane's unique reefer linings with a proprietary and unique adhesion system that protects against delamination.



# CHAMPION

## Dry Vans

Durable, versatile and built for action—qualities of a true Champion—Great Dane Champion dry vans are built to give fleets a competitive edge.

Versatility is a hallmark of the line of Great Dane Champion dry vans. Available in aluminum and stainless steel exteriors, composite panel designs, FRP and insulated models, and shallow and deep drop configurations for high-cube hauling applications, Champion dry freight vans offer the flexibility to serve all types of operations.

Durability and quality workmanship that lead to reduced maintenance costs, long service life and a quick return on investment are among the attributes of Great Dane Champion dry vans. The heaviest and strongest in the industry, extruded aluminum bottom rails on the trailers are securely fastened with hardened aluminum rivets to I-beam crossmembers. Exceptional front-end durability comes from an outer top rail splice plate that adds strength to the front-to-sidewall top rail connection and provides protection from water intrusion.

To help prevent moisture intrusion into the cargo area, the floor on Champion dry vans is pre-undercoated on the bottom and sides and

caulked at the joints. Also as a corrosion preventative, crossmembers are pre-coated with wax, including end clips, allowing for full coverage of both the floor and crossmembers.

The Great Dane Champion dry van's roof offers unmatched durability and longevity with its galvanized steel, anti-sag roof bows that are permanently bonded with a premium two-part epoxy. The tension-mounted roof sheet is joined to the top rail with an extruded aluminum molding. The attachment is closely riveted, bonding a foam sealing tape between the roof sheet and top rail, and is finished with a neoprene sealant to prevent moisture intrusion.

Standard composite swing-type rear doors on Champion dry vans have galvanized steel exterior and interior skins with a resilient polymer core, which eliminates corrosion issues associated with moisture absorption in plywood cores. Composite roll-up rear doors are available as an option.



### Keep the Strength, Fight the Elements

EnduroGuard, Great Dane's new standard rear frame for Champion dry vans with both swing and roll-up doors, is strong enough to last a lifetime. Combining strength and corrosion resistance for lasting performance, the rear frame is strengthened by a two-crossmember deep attachment to the bottom rail, which helps distribute the stresses of dock impact.

Subjected to road debris and exposed to potential damage from loading docks, carbon steel rear frames were prone to corrosion. Great Dane has now addressed that concern for customers in EnduroGuard with a unique and highly effective combination of materials that will provide greater durability and long-term corrosion protection.


Several flooring options are available on Champion models including laminated hardwoods in various thicknesses, composite floors, and aluminum dry cargo floors. The laminated hardwood floor, installed with screws in an alternating pattern for increased strength and featuring a patented zigzag joint, is pre-undercoated on the bottom and sides. It is also available with Waxin floor protection to further extend its service life.

Various interior linings options are offered on Champion dry van models, including plywood in various thicknesses and fiberglass-reinforced plastic. The extremely durable SSL lining, consisting of a layer of galvalume steel over a rigid core to produce an interior lining with a greater puncture strength and more corrosion resistance is offered, and Great Dane's incredibly thin and puncture-resistant PunctureGuard liner is available.

Champion dry vans are equipped with an exterior lighting package that uses all LED lights and the industry's best wiring harness. The Great Dane Long Life Light System is a maintenance-free, fully modular and sealed system that boasts a ten-year warranty.

For added versatility, Champion dry vans can be specified with various side door locations and quantities, and a variety of steps and grabhandles. A range of cargo restraint options is also available. A lightweight version of composite models is designed especially for heavy floor loading operations. The package incorporates a high base rail with a lighter weight side panel, a composite front wall, aluminum crossmembers, and other weight saving components.

Great Dane's complete package of comprehensive corrosion prevention solutions available on Champion dry vans includes CorroGuard, the exclusive trailer undercoating developed specifically for protection from rock and stone impingement, and chemical resistance to de-icing chemicals and road hazards.

The unparalleled design standards and proven manufacturing techniques that provide quality in all Great Dane trailers are evident in the line of Champion Dry Vans. Designed to meet a variety of dry freight hauling needs, Champion vans are versatile and built to last. 



# FREEDOM

## Flatbeds



Built to withstand the toughest operations - these flatbeds raise the bar

Great Dane Freedom flatbed models include the all-steel Freedom SE, the combination steel/aluminum Freedom LT, and the all-aluminum Freedom XP. Freedom flatbeds combine versatility and innovation with quality workmanship, strength and durability in designs that meet the needs of flatbed trailer users.

Competitive in weight without sacrificing strength and durability, Freedom flatbeds feature main beams fastened securely with attachment clips used in place of welding to prevent common stress cracking caused by twisting. Heavy-duty outriggers on the models transfer load weight from the side rails to the lower main beams and are securely attached with specially designed fasteners.

**Great Dane** ★ **FREEDOM LS**

**Great Dane** ★ **FREEDOM LT**

**Great Dane** ★ **FREEDOM XP**

The Freedom XP's suspension features designed in strength for extended frame life. The combination of galvanized steel and aluminum reinforcements between the main beams provides durability and protection against corrosion. Bolt-on "K" bracing reinforces the front axle, to help prevent stress cracking from side-to-side loads.

All Freedom flatbed models are designed to fight corrosion. Heavy-duty structural steel components on the trailers are shot blasted prior to the application of a two-part epoxy primer to ensure superior adhesion of a black urethane topcoat designed to provide protection and corrosion resistance. Also fighting corrosion are powder-coated, sliding winches.

A 1.25-inch aluminum floor is standard with four apitong nailing strips and a safety-grip surface for positive traction when walking on the deck and to help restrain cargo movement. Twelve pairs of pull-up chain ties are recessed in the floor for additional cargo securement.

Standard on all Freedom flatbed models is Great Dane Model 60 Landing Gear. Featuring a constant mesh gear box to keep gears engaged for consistently smooth shifting, the gear's construction includes a floating nut design, which protects the elevating screw from damage caused by dock walk. Supported by angle bracing at the front and rear, the Model 60 has a lift capacity of 55,000 lbs and is mounted to spread the load over five crossmembers. Steel gussets ensure extra support, stability, and strength. Completing the design, Great Dane's proprietary replaceable shock-mounted sand shoes reduce stresses in the mount by 50 percent.

The standard Hendrickson INTRAAX air-ride suspension is not only lightweight. In addition, its tapered-beam design combines with Hendrickson's Large-Diameter Axle (LDA) for increased bending stiffness and improved durability. This system also features long-life Tri-Functional® pivot bushings for a smooth ride and Quik-Align® for fast and easy axle alignments.

An additional standard feature on Freedom flatbed models is the Six-Year Stemco Platinum Performance Plus Wheel End System. The entire system, which includes Guardian HP oil seals, PRO-TORQ spindle nuts and integrated Sentinel hub caps, is warranted for five years for parts and labor and includes an additional year of coverage on parts that can be extended another three years with regular maintenance.

The Freedom standard lighting package features MicroNova® DOT LED lamps, designed to improve visibility and service life of lights. Also standard is Great Dane's Long Life Light System, a maintenance-free, fully modular system backed by a ten-year warranty. This sealed harness prevents moisture intrusion, and combines the flexibility of a custom wiring system with the reliability and simplicity of a sealed harness. 🚛

## Flatbed Distribution Expanded

Plans are underway to make the Great Dane Dallas Branch into a Flatbed Distribution Center. The hub location will house stock inventory of Great Dane platform trailers for distribution in the mid south and southwestern regions of the U.S.

Great Dane is planning to put significant platform trailer inventory in place at the Dallas location to meet anticipated growth in flatbed sales. As business conditions improve in the flatbed arena, Great Dane will be positioned to be a key supplier.



# A&A EXPRESS

Great Dane reefers are helping this refrigerated hauler provide superior service



“We’ve operated Great Dane reefers exclusively for more than 15 years,” says Tim Anderson. “We switched our fleet to Great Dane Super Seal trailers when our local dealer began representing the manufacturer and we have not looked back. Our customers rely on us to deliver temperature-sensitive shipments in an efficient and timely manner and with Great Dane we know we can meet their needs.”

Headquartered in Brandon, South Dakota, A & A Express specializes in nationwide, refrigerated hauling of fresh produce, meat and frozen foods, as well as dry goods. Founded in Walnut Grove, Minnesota in 1945 as Vince Anderson Trucking, Inc., the company was originally a livestock hauler. In the late 1970s, as demand for its highly efficient service grew, the company expanded into refrigerated trucking and A & A Express, Inc. was born. Today, Larry Anderson and Tim Anderson, son and grandson of the late founder, operate the business.

A & A Express fields 120 company-owned tractors and uses the services of about 60 dedicated owner-operators to haul its 210 Great Dane Super Seal refrigerated trailers. Replaced every three-and-a-half to four years, the reefers are built in the Wayne, Nebraska manufacturing plant.

“We put a lot of hours on our refrigeration units so we find it cost effective to replace trailers on a shorter trade cycle than most refrigerated trucking companies,” Anderson explains. “We have no issues with the Great Dane reefers. In fact, selling relatively new trailers of such high quality and integrity means we get top resale value for our trade-ins.”

The Great Dane Super Seal reefers now in service at A & A Express will soon be joined by 60 new Everest SS models scheduled for delivery between April and July of this year. The 53-ft trailers will be equipped with Carrier Transicold refrigeration units and have aluminum duct floors with composite sills, along with stainless rear frames and bumpers, and swing doors with a bright finish stainless steel exterior.

Inside its reefers A & A Express specifies Great Dane’s unique PunctureGuard lining for its strength and lightweight attributes. With an inherent stiffness that comes from its high glass content, PunctureGuard helps ensure that force from pallets, cargo or forklifts during loading and unloading operations does not damage the foam insulation in the trailer walls, causing it to lose thermal integrity.

PunctureGuard, which is incredibly thin and considerably lighter than plywood and FRP linings was found to be one fourth to one third stronger than competitive products in comprehensive tests. The lining is also easy to repair, lowering maintenance costs, and is easy to clean, making it simpler to maintain the trailer’s appearance.

Also helping save weight on A & A Express reefers are aluminum hat type crossmembers forward of the landing gear and aluminum I-Beams in the bay area. Running gear on the trailers includes sliding tandem axles with Meritor RideSentry air suspensions and 295/75R22.5 Bridgestone R195F tires on aluminum wheels. Meritor Q Plus service brakes and Meritor WABCO Easy Stop ABS are standard as well.



A & A opts for the STEMCO Platinum Performance System Plus wheel end system, an offering exclusive to Great Dane. The integrated solution combines components from the manufacturer's line of wheel end products including Guardian HP or Discover seals in hub or a spindle mount configurations, Pro-Torq axle spindle nuts, Sentinel hubcaps and heavy-duty bearings.


Two specifications on A & A Express trailers are keeping costs down. The Meritor Tire Inflation System (MTIS) keeps tires inflated properly, helping ensure longer tread life, fewer breakdowns and improved fuel efficiency. The carrier also specs MTIS with ThermALERT, a high-temperature protection solution.

The Grote LongLife Light System with LED lights is standard on all A & A Express reefers. The completely sealed system is designed to help prevent damaging moisture intrusion. The modular and maintenance-free system combines a custom wiring solution with the durability, reliability and simplicity of a fully sealed harness.

Grote MicroNova upper front, rear side marker and header lamps are also on A & A Express reefers. The aerodynamic LED clearance marker lamps are designed to fit in the narrow top rail of the trailer using only a three-quarter inch mounting hole. The low half-inch profile of the lamps also makes them less susceptible to damage.

Preventing damage is something that A & A Express focuses on every day.

"Whether our customers are shipping frozen, deep-frozen, refrigerated products or produce, or confectionary or baked goods, A & A Express promises to deliver temperature-sensitive shipments in an efficient and timely manner," Anderson says.

"Our trailers are designed to properly cool and refrigerate shipments to minimize or eliminate product loss," Anderson adds. "A & A Express is a premier refrigerated transport company featuring a state-of-the-art fleet of superior Great Dane reefers." 

## Everest SS Reefers

Featuring the durability inherent in all Great Dane reefers, the Everest SS model is built with side-walls that incorporate extruded aluminum "J" uprights, an extruded aluminum front impact plate and patented roof corrugations that provide additional stiffness to the structure-- and control thermal expansion of the roof sheet, minimizing the potential for delamination from the insulation. All aluminum doors on the Everest SS have a triple seal and standard flooring is a 1.38-inch extruded aluminum duct floor that is fully welded to seal out moisture.

Available with a long list of options for long-haul truckload refrigerated carriers, the Everest SS reefer can also be specified with company-exclusive products, including ThermoGuard lining to help extend the useful life of refrigerated trailers and CorroGuard undercoating for trailer underbody protection.





# BRIDGESTONE



## Great Dane trailers are now traveling with the new fuel-efficient Ecopia® trailer tires

Part of the innovative new Bridgestone Ecopia solution, two new fuel-efficient tires are now available on Great Dane trailers. The R197 Ecopia for dual tire assemblies and the Greatec R135 Ecopia for wide base singles feature Bridgestone breakthroughs in low rolling resistance rubber compounding, and in tread and casing design.

Ecopia radials are designed to be fuel-efficient, smooth wearing and highly retreadable. The R197 Ecopia and Greatec R135 Ecopia incorporate optimized tread depths and tread designs, along with exclusive irregular wear-fighting technologies. Both new tires have sturdy sidewall protector ribs that help shield the casing against damage from curbing, cuts and abrasions.

Designed with a long wearing 11/32-inch tread depth, the R197 Ecopia tire has numerous cross-rib sipes and straight grooves for solid wet traction. The tire features Bridgestone's new IntelliShape™ sidewall design that removes weight without sacrificing durability. The R197 Ecopia radial also utilizes Bridgestone's Defense Groove™ design to fight shoulder edge wear, along with extensive stress-relief siping to combat river and wavy wear.

Offering the very latest in fuel-efficient design and rubber compounds, both in tread and sidewalls, the Greatec R135 Ecopia features Bridgestone's innovative Waved Belt™ casing design. Also, along with stone rejector platforms to fight stone drilling, the manufacturer's exclusive Turn In Ply™ bead design contributes to enhanced casing durability and retreadability.

The Greatec R135 Ecopia wide base trailer radial has both Defense Groove™ and Equalizer Rib™ technologies to resist irregular wear, along with a Bridgestone-exclusive shoulder construction that promotes even shoulder wear for long original tread life.

The R197 Ecopia trailer radial is available in popular standard and low profile sizes. The Greatec R135 Ecopia is available in a 445/50R22.5 size.

EPA SmartWay® verified and fully compliant with CARB requirements, Bridgestone's new Ecopia trailer radials help preserve the environment by conserving fuel and reducing greenhouse gas emissions, and by reducing waste by enhancing treadwear and retreadability. The latest trailer tires from Bridgestone will also help cut costs for Great Dane customers by promoting optimum fuel economy, both when the tires are new and when retreaded with Bandag FuelTech® products that complete the Ecopia solution. 🚗

# Tectran

## Severe Weather Gladhands

Great Dane's proactive approach to corrosion protection in all of its trailer models includes working with Tectran to develop premium Severe Weather Gladhands. Customer feedback on how harsh road chemicals were affecting this commonly overlooked hook-up point led to the development of new gladhands by Tectran in support of Great Dane's research and development efforts.

Great Dane is already installing Tectran's new gladhands on trailer models. This first of its kind corrosion resistant gladhand is now a standard option on vans, reefers and flatbeds in straight and angled versions, depending on trailer design.

Tectran Solutions Severe Weather Gladhands feature a fully anodized body that keeps road chemicals from attacking the outside and the inside of the gladhand. The new gladhands also have wide lipped polyurethane seals that provide for long-term performance and durability. Unlike compression seals that can roll off the body of the gladhand, the wide lip accommodates varying dimensions and the polyurethane outlives traditional rubber seals. Polyurethane seals also offer an additional level of protection due to their UV resistance characteristics.

The new Tectran gladhands have the industry's first stainless steel clasp plate and mounting bolts to ensure that dimensional integrity is maintained and the connection is sealed for the long term.

Maintaining clamping force for a true seal is critical. Gladhand leaks caused by corrosion can cause air compressors to run overtime to maintain minimum system pressure, leading to excess fuel consumption.

A stainless steel fine mesh screen in the Tectran gladhands provides advanced protection from harmful dirt particles and other contaminants. The number one cause of failure in ABS valves is system contamination, an expensive component that can be protected effectively by Tectran's serviceable thimble screen.

Tectran polarized aluminum cast gladhands also prevent accidental reverse hook up. The Emergency side has a "tab protrusion" and the Service gladhand has a "stopper arm" that prevents the two from being connected. Further identification is provided by color-coded seals in industry standard Red and Blue, as well as an "E" and "S" cast in the gladhand head representing Emergency and Service.

The concerns addressed by Tectran and Great Dane in the design of the new Severe Weather Gladhands is helping fight corrosion, cut costs and ensure proper operation of trailer air systems. 🚛



Brought to you by,

# Prolam

## Which Hardwood Species are the Best for Dry Vans



Great Dane hardwood flooring supplier, Prolam is an expert source of information on the different types of hardwoods used in trailers.

In North America, laminated hardwood floor manufacturers use different types of hardwoods, including Oak, Maple, Birch and Beech. Based on their properties there is no evidence that one is superior than another. In fact, almost all hardwood species can be used to make durable laminated hardwood floors for dry van trailers.

Why do some manufacturers use one species of hardwood while others favor a different material? The answer is geography. To reduce costs, manufacturers often use the resources closest to their plants.

There are more critical factors to consider when choosing a hardwood trailer floor. Wood preparation, the type of glue used to laminate the hardwood, quality control during curing and other manufacturing processes, are all more crucial when it comes to the ultimate durability of a dry van trailer floor.

Dry van floor failures are very rare. If it happens most are not related to the hardwood species, but rather to a lack of quality during manufacturing, abuse or trailer design. 🚛



# CELADON GROUP

Great Dane Champion CP composite dry vans are meeting the need of one of North America's top truckload carriers



“We have some of the newest equipment the industry has to offer,” says Paul Will, vice chairman, president and COO of Celadon Group, Inc. “We want our customers to be able to count on us, and to provide a high level of reliability and dependability we have counted on Great Dane since the early 1990s.”

Headquartered in Indianapolis, Celadon fields 3,000 tractors and 8,500 trailers. By the end of June 2012, the fleet will include 3,200 new Great Dane dry vans purchased over an 18-month period. “Due to interest rates and financing available, we have been on an aggressive replacement cycle,” Will relates. “In the past year we have replaced two-thirds of our trailer fleet, and we have concluded that Great Dane builds one of the best trailers on the road.”

In 2004, Celadon began specifying composite plate trailers for its operation. “We haul high cube freight so our shippers appreciate the capacity of The Composite and now Champion CP models we have been buying for a number of years,” Will says. “With Great Dane we get high cube, reliable and durable trailers, and a brand name that helps bring in one of the highest resale value.”

Brand name recognition is especially important to Celadon, which sells many of its used trailers directly to fleets at company locations in Indianapolis and Dallas. Wholesalers and the Great Dane branch and dealer network are also used to dispose of trailers being taken out of service. “With Great Dane, whether it’s to trade in used trailers or to handle repairs, we always find people who know what it takes to meet our needs,” Will states.

The newest Great Danes joining the Celadon fleet in 2012 are 53-ft Champion CP models. The composite plate trailers built at the Terre Haute, Indiana plant feature .30-inch composite plate sidewalls with .019-inch galvanized steel skins. The fleet also specifies .50-inch composite rear swing doors with galvanized steel cover sheets.

Close attention is paid by Celadon to the interior of its trailers. Its newest Champion CP models are specified with two rows of extruded aluminum scuffband on sidewalls, including a 6-inch high row integrated with the bottom rail at floor level that is topped with a 12-inch high row. Front wall scuffbands in the trailers are 12-inch carbon steel welded to the coupler. On ceilings, the rear eight feet of the trailers are lined with Great Dane’s exclusive PunctureGuard lining. The .070-inch lining, known for its strength that comes from its high glass content, was found to be one-fourth to one-third stronger than competitive products.

Celadon’s Champion CP dry vans are also fitted with Hendrickson HKANT40K-HD sliding tandem axles with air suspensions and STEMCO Platinum Performance System Plus wheel end systems, an offering exclusive to Great Dane that combines the manufacturer’s Guardian HP or Discover seals, Pro-Torq axle spindle nuts, Sentinel hubcaps and heavy-duty bearings.

Landing gear on the trailers is supplied by Jost and all dry vans are fitted with Bridgestone R195F tires and Grote LED lamps including MicroNova mini LEDs in the rear header. The aerodynamic lamps have a half-inch profile, which makes them less susceptible to damage, and are designed to fit using only a three-quarter-inch mounting hole.

In keeping with its commitment to the SmartWay Transport Partnership, the collaboration between the U.S. Environmental Protection Agency (EPA) and the freight industry to increase fuel efficiency while reducing air pollution, Celadon is equipping all new trailers with Transtex Composite trailer skirts. “Great Dane has been installing the side fairings at the plant since the




end of 2010," Will relates. "On trailers with the skirts we've seen from three to five percent better fuel economy than older units without them."

Celadon's entire tractor fleet also consists of SmartWay-certified models. Other fuel saving measures employed by the carrier include recalibrating engines to produce less NOx at idle, reducing the weight of equipment with a variety of aluminum components, and employing a smaller trailer to tractor gap to minimize aerodynamic drag.

Founded in 1985, Celadon has grown from 50 tractors and 100 trailers. Today, the carrier serves customers throughout the U.S., Mexico and Canada, generating annual revenue in excess of \$500 million. Celadon offers long haul and dedicated truckload service and with approximately 150,000 annual border crossings, the company is believed to be the largest provider of international truckload movements in North America.

Recently, when Great Dane's manufacturing facility in Terre Haute, Indiana completed its 100,000th trailer; the new Champion CP dry van was delivered to Celadon. "We consider ourselves very fortunate to have such a solid, longstanding partnership with Great Dane," Will says. "Our relationship is made even more special with the 100,000th Great Dane trailer being built in our home state where we have made a commitment to support and grow the economy."

"We strive to transport cargo using only the most efficient and reliable equipment available," Will concludes. "The quality of our trailers helps us achieve that goal. Great Dane is a vital part of our mission to provide top quality equipment to our customers." 

## Champion CP Dry Vans

Great Dane's Champion CP composite plate dry freight van offers heavy-duty productivity with a full 101-inch interior width and square interior corners for maximum cargo loading capability. Among the Champion CP's features are composite doors, a standard .30-inch panel thickness and logistic posts recessed at panel connections for a flush interior that eliminates damaging snag points.

A version of the Champion CP for frequent heavy floor loads is the Heavy-Duty Bottom Rail (HBR) model. The HBR option features a 21-inch high, one-piece aluminum extrusion that replaces the standard 11-inch bottom rail and eliminates the need for a 6-inch integral steel scuffband while adding rigidity to the trailer. The HBR is also available in a lightweight package with a composite front wall and aluminum crossmembers.





# Preparing for 2013 EPA Tier 4 Reefers

Refrigerated trailer fleets will soon be impacted by U.S. Environmental Protection Agency (EPA) Tier 4 Final emissions standards for transport refrigeration unit (TRU) diesel engines. The new standards, which take effect January 1, 2013 will affect operations and budgets.

For reefer engines, the new regulations require reductions of as much as 90 percent in particulate matter (PM) and 30 percent in nitrogen oxide (NOx) compared to interim standards that have applied to these units since 2008. The new EPA requirements do not affect trailers that are now in service.

The challenge that refrigeration unit manufacturers are now preparing to meet is in some ways greater than that for truck engine emissions standards. For on-highway diesels, new emission rules were phased in over a seven-year period while standards for TRU engines require most of the emissions reduction targets to be met at once.

To meet the new standards, TRU manufacturers will begin using emissions control technologies similar to those now found on tractor engines. To meet Tier 4 Final standards, manufacturers are also looking into technologies that could include electronic controls, turbochargers, catalytic converters, exhaust recirculation devices and diesel particulate filters.

The implementation of EPA Tier 4 Final emissions standards for TRUs could have several effects on refrigerated fleets. In addition to considering the expected higher cost of the new units when planning budgets, fleets will need to train drivers and technicians to operate and maintain the new refrigeration equipment.

Trailer manufacturers and their refrigeration unit suppliers are geared up to help customers navigate the uncharted territory that will come with the new TRU designs. Plans call for providing driver and technician training and for making maintenance resources available.

Manufacturers are also prepared to ramp up production and schedule orders for new refrigerated trailers so their customers will have the equipment they need to meet freight hauling demand over the next several years. The pending EPA Tier 4 Final TRU regulations are one of several factors that are now causing an increase in demand for new refrigerated trailers.

Refrigerated trailer operators and their suppliers can also look back on their success in meeting California Air Resources Board (CARB) regulations for TRUs, and use that experience as a model for preparing to meet the new EPA Tier 4 Final regulations with minimal disruption to their business.

CARB regulations required refrigerated carriers operating in California to replace or upgrade refrigeration units that were more than seven years old, unless certain electric standby protocols were in place. Many fleets were able to comply with these requirements and avoid replacing reefers by working with manufacturers to update TRU engines or install diesel particulate filters.

The upcoming Tier 4 Final EPA regulations for TRUs are a new incentive for refrigerated fleets and manufacturers to work together to adopt technologies that will meet the standards and provide effective performance. Working in partnership with experienced trailer and refrigeration unit suppliers, the process of adopting these new technologies will not only be more efficient, but will help achieve cost, operational and environmental protection goals. 🚛



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