



RAILBLAZERS®

ALLTRANSTEK, LLC

RAILCAR FLEET MANAGEMENT AND CONSULTING

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VOLUME III ISSUE II

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CLOSER LOOK SERIES

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STANDARDIZATION:

MAXIMIZING EFFICIENCIES, PROCESSES, AND WORKFLOW

There are several metrics that can be used to measure aspects of a company and how they operate. These include, but are not limited to, profitability, market share, growth, and societal contributions. How a company achieves these is an accumulation of a myriad of factors. However, two that inevitably come into play, especially in the rail industry, are safety and efficiency. It is critical to the success of a rail shipping company to keep its rail assets in service, while ensuring they are safe to transport commodities across the continent and in compliance with applicable regulations. One of the most straightforward ways to help maximize both safety and efficiency is through standardization.

There is no shortage of standardization in the rail industry, and with good reason. The rail-

roads need to be able to move assets across carriers without incident, repairs need to be able to be made, documented, and billed consistently, and equipment of all types needs to be compatible. From a data standpoint, Railinc serves to consolidate and structure volumes of information that railroads and rail fleet managers require to keep things running. The Federal Railroad Administration (FRA) issues regulations to police the industry and oversee compliance with construction and maintenance standards. Standardization enables the rail industry to operate more efficiently and at lower costs. On a scale that exceeds the rail industry, commodity and location type codes help communication between modes of transport and between companies. When combined, these multiple levels of standardi-

Continued on page 2.

CAR TYPE HIGHLIGHT: TANK FLEET

The tank car fleet, which currently totals 414,872 cars, is unique when compared to other car types because of its ability to transport liquid and gas commodities. It is the second largest major car type segment in the North American fleet.

The North American tank car fleet is split into three segments: pressure car, general purpose, and specialty. Within these segments, cars are further differentiated based on capacity. Tank cars can be further differentiated based on the presence of coils, insulation, or other important service equipment.

The general purpose fleet is segmented into five categories: GP small, 20,00 gallon GP, 23,500 gallon GP, 25,500 gallon GP, and GP large. The GP large segment makes up the largest portion at 42.7% of the GP fleet, or 31.5% of all tank cars.

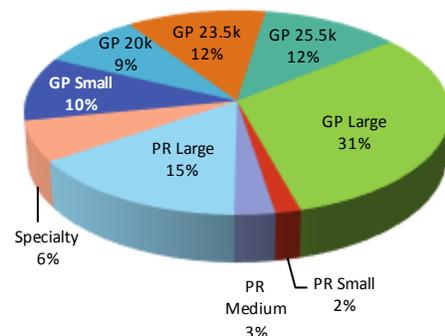
The pressure fleet is divided into three catego-

ries: small, medium, and large. Large pressure cars represent 77.2% of the pressure fleet.

The majority of tank car traffic moves in General Purpose and Pressure cars, combining to

Fleet Demographics

Tank Car



Source: Umler, AllTranstek; 414,872 cars

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PROGRESSIVE RAILROADING ARTICLES

AllTranstek's Chief Commercial Officer, Richard Kloster, was recently featured by Progressive Railroading Magazine in the August 2017 issue.

August 2017 - Rail-car outlook: Where did the momentum go?

The promising forecast for 2017 has not come to fruition despite being halfway through the year. Learn why.

**CLICK TO READ
FULL ARTICLE**

February 2017 - Commentary: If things are so bad in the rail-car leasing industry, why are so many jumping in?

This article examines investors' interests in railcars in spite of an unkind market in recent years.

**CLICK TO READ
FULL ARTICLE**

December 2017 - Rail Equipment Outlook 2018

As 2017 draws to an end, this article offers insight into the future of rail equipment throughout 2018.

Look for this article in the December 2017 issue of Progressive Railroading Magazine.

Continued from page 1.

zation promote consistencies that benefit everyone.

Yet, between all the fixed rules and regulations, there is a tremendous amount of "wobble room" for customization. Much of this is good, allowing for ingenuity and advancements in methods and technology, but many times companies do things the way they always have, simply because that is the way it has always been done. The introduction of new standards can easily bring about new efficiencies and better guarantee the safety of personnel and assets alike.

AllTranstek has been building new means of bringing standardization to the industry for almost 20 years. Much of 2017 has been invested in working towards the new FleetWatch® Holos platform. This suite of applications has been in development for several years, with tools and standards like FleetWatch® SEE (Shop Event Environment), facilitating railcar shopping events, FleetWatch® RAE (Repair Audit Environment), used to audit running repairs, file claims, and collect CBAs, and FleetWatch® LA (Lease Abatement), for policing lease car rates, out of service time, and appropriately allocated credits all augmenting our flagship FleetWatch2® fleet management toolset. Customization allowed AllTranstek the flexibility to let our clients manage their fleets their way, pairing up to their own systems and semantics seamlessly. The FleetWatch® Holos platform continues to allow for that customization while bringing about greater consistency behind the scenes, in turn allowing AllTranstek to almost immediately bring new services and workflows to all clients at once.

For tank car owners, although HM201 had been in place since 1997, it was not until the implementation of HM216-B in 2012 that adherence to the regulations was really fully enforced. For those that had been following the regulations under HM201, they had a jump on the regulations and were able to more rapidly show compliance and avoid incidents and/or fines. For the rest, there were few options. AllTranstek heard the need, and responded with the StencilWatch® offering. This brought together several tools and services that AllTranstek already had in place for years, and tied them together in a way that maximized efficiency and familiarity. Rail car

owners using a new shop could now send a car in for qualification, and the shop could confidently estimate work almost immediately due to their already being acquainted with AllTranstek's licensed procedures. The time to bring fleets up to speed, roll out the procedures, collect data, and perform analyses was all minimized due to the implementation of a score of standards, and this equates to tens of thousands of dollars of savings for the car owners.

Beyond that, AllTranstek offers services in all types of training, inspection of cars and facilities, auditing of plants and shops, engineering analyses, and higher corporate-level strategic services, all of which leverage consistent tools and methods. This ensures that the subjects of these services conform to standards that guarantee the car owner and regulators can have confidence that things are done right.

AllTranstek personnel are active in numerous industry committees and organizations, and work to help implement productive standards whenever possible. Currently, AllTranstek is working with VSP Technologies and Trelleborg Sealing Solutions (formerly Carolina Seal Transportation Solutions) to standardize distribution of the RideTight® program documentation for participants.

So, no matter what your role is in your company, you can likely look around at your processes and practices, and in so doing see opportunity for improvement. If you want to know whether further standardization can bring efficiency and safety increases to your company, look no further than AllTranstek for your answers. We can perform gap analyses on your workflow and business, and make recommendations where we see things that need to be addressed or can be made better. Reach out to your fleet manager, or contact us at info@alltranstek.com. We are always more than happy to lend a hand.

This article was written by Matt Johnson, AllTranstek's Vice President, Client Services. Matt joined AllTranstek fifteen years ago and has over 20 years of experience in the rail industry in a variety of systems engineering positions.

HANDLING REQUIREMENTS FOR SUBMERGED EQUIPMENT

On August 25th, Hurricane Harvey became the first Category 4 hurricane to make landfall in the Texas Coastal Bend since 1961. In its first five days, Harvey set a continental U.S. record by dumping 51 inches of rain in some parts of Houston. Hot on Harvey's heels came 400-mile-wide Hurricane Irma, leveling the Caribbean and destroying parts of Florida. Such intense rainfall and flooding has resulted in the submergence of railcars in many areas of Texas, causing concern throughout the rail industry.

Submerged equipment is governed by a different set of inspection and repair rules due to the nature of damage. Per the 2017 AAR Field Manual, equipment is considered submerged "when any portion of a component has been under water." With countless cars and facilities partially or completely submerged, this poses a significant threat to car owners and their responsibility for ensuring cars are in good working condition.

AllTranstek has identified five rules relevant to

the handling requirements for submerged air brake equipment and roller bearings in the AAR Field Manual. Rules 4, 8, 36, 95, and 99, respectively govern air brakes and parts, automatic slack adjusters, roller bearings, handling and/or delivering line responsibility, and cars on private and/or non-subscriber track.

To learn more about the specific requirements associated with each rule, view AllTranstek's guide [here](#).



SUPPLIER MOMENT

TRANSQUIP USA

Has pressure on the tank car supply chain remained strong in the "post-crude oil" build cycle and qualification/repair picture? Are you seeing more demand for components in the new car market or in the aftermarket? Does this vary across certain component types?

Because of the steady re-qualification trend and some limited retrofit activity, most of our current demand is for the aftermarket. We supply all types of service equipment, and each is typically rebuilt due to re-qualification requirements. Despite declines in the new build market, aftermarket demand continues to put pressure on the component supply chain.

Among all your product categories, where do you see the most innovation from an industry perspective and from Transquip's perspective?

Transquip's new single bolt manway cover is designed to help the industry eliminate the main cause of non-accidental releases (NAR's), which is the manway. By eliminating the eyebolts and replacing the gasket with an o-ring, the single bolt manway allows for a smoother and more consistent seal in the tank car's manway, reducing both the potential for NAR's and maintenance costs.

Are any of Transquip's product development decisions driven by the current tank car regulatory environment? Are there special requirements for your products based on new regulatory decisions?

Yes, our product development is tied closely to regulatory requirements depending on the product type and the industry requirements. As we supply service equipment in the form of loading and unloading valves, safety valves, and secondary closures, it is extremely important for Transquip to ensure our product integrity is both high, and in keeping with regulatory demands.



SCHEDULE OF EVENTS 2017

SEPTEMBER

11-13: National Coal Transportation Association

Denver, CO

12-14: FTR Transportation Conference

Indianapolis, IN

17-20: RSI Railway Interchange

Indianapolis, IN

19-21: S.E.A.R.S.

Savannah, GA

25-28: Chlorine Institute

National Harbor, MD

OCTOBER

4-6: S.W.A.R.S.

Irving, CA

17-19: Tank Car Committee Meeting

Dallas, TX

18: NAFCA

Rosemont, IL

30- Nov. 2: ASNT Annual Conference

Nashville, TN



FTR 2017 TRANSPORTATION CONFERENCE

The FTR Transportation Conference delivers more intelligence than prior years via four content channels over two days. After setting the stage with the State of Freight (overall economy and freight environment) review the morning of day one, concurrent sessions begin. Content channels include: Shippers, Carriers & Brokers, Truck & Trailer Equipment, and Rail Equipment.

RAIL EQUIPMENT CONTENT CHANNEL

Gain deep insight into forecasting and current conditions. Cover hot topics like government regulations, crude, and non-crude market segments.

Industry leaders will converge on September 12-14, 2017 at the historic Union Station, in downtown Indianapolis, IN to deliver the most complete and comprehensive outlook on freight transportation in North America.

Register or learn more at...
www.FTRconference.com



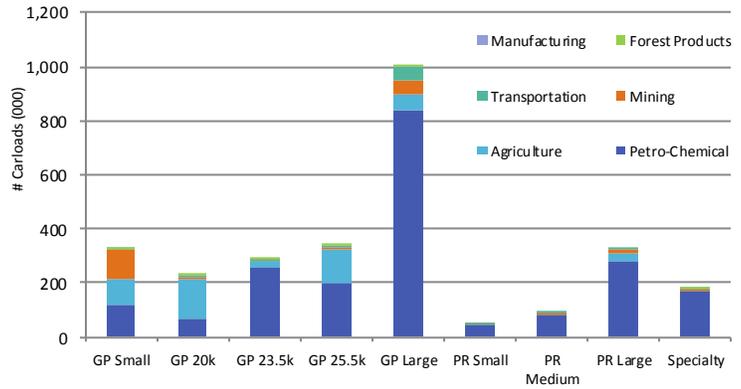
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total 93.5%. The remaining 6.5% moves in Specialty cars. The Large GP fleet accounts for 31.5% of all tank cars and moves 34.6% of all tank car traffic, primarily ethanol and crude petroleum shipments. Chemicals and petroleum products combined represent 75.1% of tank car traffic.

Shippers are responsible for supplying their own tank car equipment as tank cars, heavily relied upon for shipping liquid or gas products, are one-way cars that lack pooling opportunities. Consequently, 99.7% of all tank cars are owned by leasing companies and shippers. Recent trends have shown an increase in lessor ownership of tank cars at the expense of shipper owned cars.

Highly active energy markets over the past few years sparked an increase in tank car production. This growth has caused the tank car fleet to remain relatively young as the median age

Tank Car Traffic by Equipment Type 2016 Carloads



Source: STB Waybill, FTR, AllTranstek; 2,741,143 carloads

and average age of this fleet has decreased.

Utilization for tank cars, which bottomed at 50.4% in 2001, has averaged 76.9% since 1992. Utilization of the tank car fleet further spiked throughout the crude-by-rail (CBR) boom. However, with a wealth of new car deliveries over the last 5 years, and the rail share of the CBR market slipping due to pipeline competition, the fleet's surplus and utilization metrics are suffering, and a large portion of the tank car fleet has moved into storage.

All charts and graphs come from the Tank Closer Look Report

STENCILWATCH®

COMPLIANCE FOR TANK CAR OWNERS

Effective 2012, tank car owners are responsible for achieving and maintaining compliance with vital industry and federal regulations. This can be a complicated and time consuming process during which car owners expose themselves to costly mistakes caused by noncompliance. AllTranstek's StencilWatch® program provides a comprehensive compliance package, allowing tank car owners to manage all their regulatory requirements.

StencilWatch® is comprised of six components, each designed to address a specific need. The pieces are intertwined and rely upon each other for accuracy and scale of information. A tank car owner lacking one or more of these pieces is not compliant. **Maintenance & Qualification Procedures** written by highly trained engineers address clients' individualized needs. Data collected from maintenance procedures and subsequently stored in **Fleet-Watch RCM®** (Reliability Centered Maintenance), a program unique to AllTranstek that works concurrently with an online **Document Hosting System** (DHS) to provide clients pertinent documents and statistical analysis at the

touch of a button. This analysis, known as **Qualification Interval Analysis**, combines fleet data in order to create reliability curves that help clients make informed decisions for compliance regarding each individual tank car. **Tank Car Integrated Database Compliance** (TCID) contributes to compliance maintenance by recording all repair and modification data provided by tank car owners. AllTranstek's StencilWatch® team handles data entry and submittal, freeing car owners' time to focus on growing their business.

The **ShopWatch® Supplier Assessment** is a program that audits tank car repair facilities for compliance with regulations.

AllTranstek's StencilWatch® program is used by many tank car owners and lessors in the rail industry. Unlike any other compliance program, this comprehensive bundle of services ensures clients will be kept up-to-date with ever changing regulations. For more information on StencilWatch®, contact info@alltranstek.com.

EMPLOYEE SPOTLIGHT

JIM DINELL

VP, NDT & SPECIAL PROCESSES

Jim oversees AllTranstek's NDT Level IIIs and technical support consultants who provide support to over 40 customers in the rail industry. In his role, Jim provides NDT training courses, creates procedures, and audits NDT programs. He supports customers with FRA and AAR issues and findings.

Jim's rail industry career spans three decades and has exposed him to a wide variety of inspection, NDT, and technical support roles. Jim is a member of several AAR task forces and was chairman of the AAR Appendix T task force for over 11 years. He is a member of the American Society of Nondestructive Testing and the American Welding Society. Jim has ASNT NDT Level IIIs in 8 NDT Methods (LT, UT, IR, MT, PT, VT, RT, and AE) and is a Senior AWS CWI.



Jim will be presenting the upcoming NDT webinar.

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LARRY LOMAN

DIRECTOR, ENGINEERING

Larry and his team of highly skilled engineers work with clients to meet regulatory requirements. In his role, Larry creates procedures for tank car qualification and maintenance, completes reliability studies and analysis, and provides technical support to AllTranstek's railcar fleet management team. He organizes training classes for tank car valve rebuilding and application, and hazardous materials loading and unloading.

Larry is an active member of multiple industry organizations. Notably, Larry is both a voting member and a moderator in The Chlorine Institute. He participates in the Association of American Railroads Tank Car Committee and the FRA Railroad Safety Advisory Committee. In 1996, Larry was issued a patent for Stem Seal Configuration for Ball Valves, 5,577,709.



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RIDE-TIGHT® TRANSITION

Over the years, VSP Technologies and Trelleborg Sealing Solutions (formerly Carolina Seal Chemical Transportation Solutions) have worked to set the bar high when it comes to sealing solutions for the rail industry. Their gasket and o-ring kits and options have made it possible for car owners to best assure that these aspects of their fleets are working as needed. These partner companies introduced the Ride-Tight® program several years ago, which is a comprehensive collection of products, materials, and training to ensure maximum safety, compliance, and efficiency for the shippers' fluid sealing needs. Now, in 2017 they're standardizing their document storage and delivery methodology to again ensure the best possible standards.

Starting in September, VSP Technologies and Trelleborg Sealing Solutions will be leveraging AllTranstek's Document Hosting System (DHS) to put the Ride-Tight® procedures in front of participants, plants, and shops alike. The DHS allows the partners to finalize new and revised procedures, and then once approved by the

car owner, have them posted on-line. DHS is structured in a way that makes it possible for the administrator to post the file once, and have all users with access updated instantly, enforcing granular but flexible security around the document access rights conforming to the car owner's requirements. Revision control and document retention are inherent in the system, and training is almost unnecessary as virtually every for-hire repair facility in North America is already using the DHS to access procedures, forms, drawings, SDSs, and other necessary documents for themselves and their clients. Among the many benefits of using this standardized system are increased savings in terms of both money and time.

AllTranstek is proud to assist VSP Technologies and Trelleborg Sealing Solutions by extending the use of this tool to their companies at no cost to their clients. If you'd like to learn more about how the AllTranstek DHS works or how it can help you with your documentation requirements, contact info@alltranstek.com.



ALLTRANSTEK PRESENTATIONS AND EVENTS 2017

WEBINARS

Mileage Equalization

Date: October 4, 2017

This presentation will discuss the cost-saving benefits of the mileage equalization process.

Presented by: D. Guzman and I. Balmaceda

NDT

Date: November 15, 2017

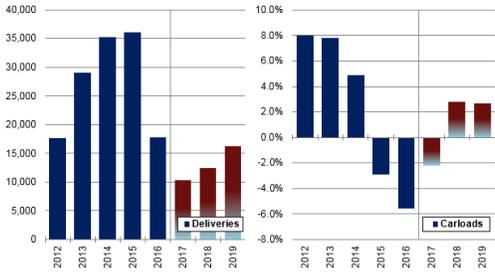
Contents: This free webinar will review nondestructive testing and related topics.

Presented by: J. Dinell

FTR OUTLOOK: TANK FORECAST

- ◆ **Freight:** Tank car traffic forecast to fall 2.2% y/y to 3,013,000 carloads then grow at a 2.7% AAGR over the 2018-2021 period to 3,345,000 by 2021.
- ◆ **New Cars:** Deliveries forecast to fall 42.3% y/y in 2017 to 10,287 cars, increase at a 17.8% AAGR over 2018-2021, average 16,300 cars per year.
- ◆ **Inventory:** Retirements projected to be high in 2017, totaling 10,356 cars, a 32.1% y/y increase. Over 2018-2021 retirements are expected to average 12,500 cars per year, increasing at a 5.7% AAGR.
- ◆ Fleet projected to be flat in 2017 and 2018 to 414,200 cars, increase at a 1.2% AAGR over 2019-2021 to 429,100 cars in 2021.
- ◆ Surplus projected to decline in 2017, falling 2.1% y/y to 140,200 cars, improve 11.4% in 2018 to 124,100, climb to 141,700 cars in 2021, a 4.7% AAGR over the 2019-2021 period.

N.A. Tank Car Outlook



Source: FTR; Copyright 2017

Tank Car Market Indicators: 2017Q2

Actual, Not Seasonally Adjusted	2016	2016	2017	2017
	Q3	Q4	Q1	Q2
Orders	881	889	1,589	4,458
% Change, Y/Y	-39.8	-24.4	140.8	49.8
Backlogs	21,317	18,344	16,999	18,958
% Change, Y/Y	-44.6	-40.4	-33.5	-22.4
Deliveries	3,766	3,872	2,353	2,209
% Change, Y/Y	-57.4	-53.6	-60.0	-48.8
Backlogs/Deliveries Ratio	5.7	4.7	7.2	8.6
Net Orders/Deliveries Ratio	0.2	0.2	0.7	2.0

Source: ARCI Committee of the Railway Supply Institute

- ◆ Fleet utilization forecast to improve 1.2 points y/y in 2017 to 66.2%, peak at 70.1% in 2018, decline steadily over 2019-2021 back to 66.8% in 2021.
- ◆ **Forecast Changes:** Lower deliveries and lower surplus.
- ◆ **Downside Risks:** Freight weakness and economic conditions, high persistent surplus, lower retirements
- ◆ **Upside Risks:** Higher replacement demands, improvement in oil prices, rail network issues from hurricanes and CSX.

All charts, graphs, and data are derived from the FTR Rail Equipment Outlook Report
For more information on this report, please visit www.ftrintel.com/REO

A CLOSER LOOK SERIES

A Closer Look Series is comprised of six individual reports, each of which exclusively covers one of the major car types: Covered Hoppers, Tank Cars, Gondolas, Open Top Hoppers, Box Cars, or Flat Cars. These reports provide invaluable information and insight for longstanding rail equipment industry participants, as well as new entrants to the industry. Among the companies who will benefit the most are fleet owners, leasing companies, new car builders, component suppliers, service providers, financial institutions, investors, rail carriers and shippers.

A Closer Look Series examines the current railcar market from multiple angles, analyzing trends in fleet size, age, ownership, segmentation, commodity traffic bases, new car deliveries, retirements, utilization, attrition, car surpluses, and much more.

[Click here for more information on A Closer Look Series](#)



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Founded in 1994, AllTranstek has grown into one of North America's largest railcar management and consulting companies, currently managing over 275,000 railcars for some of the country's largest fleets. AllTranstek also provides technical, operational, and strategic consulting services to a broad range of companies active in the rail and rail equipment supply chains. No other company has the combination of institutional knowledge, innovation, and independence that characterizes AllTranstek. As an independent company, with no ties to outside funding from industry or government, our clients can be confident that we always have their best interests in mind. AllTranstek continues to cultivate strong relationships with clients both large and small because of our ability to creatively and flexibly tailor services of various sizes and scopes to each customer's individualized needs.