



RAILBLAZERS®

ALLTRANSTEK, LLC

RAILCAR FLEET MANAGEMENT AND CONSULTING

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VOLUME IV ISSUE II

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CLOSER LOOK SERIES

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DATA DRIVEN DECISIONS THROUGH MARKET RESEARCH METHODS

How much are your decisions worth? Whether you are making a hundred-, a thousand- or a million-dollar decision, each choice could impact the future success of your business. Before making those decisions, are you generating the right questions? Are you seeking out unbiased answers that may prove or disprove your gut response? Where do you turn for market intelligence? As railcar owners, managers and stakeholders, you might call sales executives or maybe a former colleague who may have years of insight into the particular issue. In the market research world, the phone calls, meetings, and visits are known as primary market research. Further, if you were looking for broad economic information, you might turn to a government agency or some other recognizable/reliable organization such as the Association of American Railroads (AAR) or FTR. The latter exercise is called secondary market research.

So, what really is market research and why is it critical to your business decisions and business

planning? How do you classify and evaluate data sources? Which dynamics have the greatest influence on supply and demand? Primary and secondary market research is only as valuable as the process and analysis used to evaluate and draw conclusions.

AllTranstek's Strategic Services group is often called upon to assess various railcar industry segments and related supply and demand dynamics for a variety of purposes. For example, a lessor client may wish to assess the likely demand for a car type as it looks to expand its portfolio, while a shipper client may seek to gain leverage on its owned railcars to determine whether to lease or buy additional railcars for its dedicated fleet. Furthermore, other car owner clients, whether lessors, lessees or shippers, may be required to balance the risk of their portfolio, and utilize market research to determine which cars to keep and which cars to place in the secondary market. As such, market research can offer *Continued on page 2.*

CAR TYPE HIGHLIGHT: TANK CAR FLEET

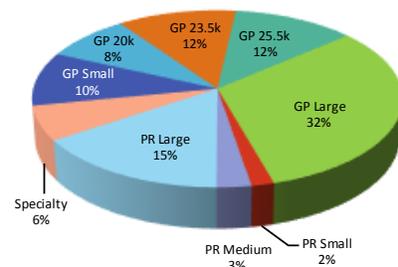
The tank car fleet, which currently totals 415,896 cars, is unique when compared to other car types because of its ability to transport liquid and gas commodities. It is the second largest major car type segment in the North American fleet.

The North American tank car fleet is split into three segments: General Purpose (GP), Pressure, and Specialty. Within these segments, tank cars are further differentiated based on capacity. Tank cars can be further segmented based on the presence of coils, insulation, or other important service equipment.

The GP fleet is the largest segment at 73.6% of the fleet. Within this fleet, 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 categories: small, medium, and large. Large pressure cars represent 77.6% of the pressure fleet.

Fleet Demographics
Tank Car | 2018



Source: Umler, AllTranstek; 415,896 cars

Continued on page 4.



INDUSTRY ARTICLES

AllTranstek's Chief Commercial Officer, Richard Kloster, was recently quoted in the Wall Street Journal.

[CLICK TO READ
FULL ARTICLE](#)

PROGRESSIVE RAILROADING ARTICLES

February 2018 - *Commentary: Rail-car lessees need to know the lease accounting standards*

By: Dick Kloster and Rob Hart

This article focuses on the implications of the new lease accounting standards on rail-car lessors.

[CLICK TO READ
FULL ARTICLE](#)

December 2017 - *Rail Equipment Outlook 2018*

By: Dick Kloster

As 2017 drew to an end, this article offered insight into the 2018 rail equipment forecast.

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- deep analysis of a market's demand and structure
- insight into the competitive landscape
- guidance toward strategic planning.

The challenging part of performing market research is knowing how to organize the information in a way that is meaningful, insightful and illustrative. An illustration might include a review of the specific industry drivers for a particular commodity and how those compare to commodity carload trends across various modes of transportation. A data driven insight might highlight noticeable changes in the build cycle of a particular railcar type as preferences for a larger capacity car might be overtaking that of the standard car type, corroborating the primary research discussed above. Methodical and time-consuming organization of data and information through segmentation may ultimately inform strategic thinking and business planning once the data is passed through the scientific methodology. By segmenting a market, a decision-maker has a means to explain the visible trends of a key market in a rational way before the decisions are made, before any planning begins, and before dollars are spent.

Market research starts with questions. What questions are you and your team asking about your portfolio?

- Do we expect to have enough railcars to support our product growth?
- Where can I anticipate lease rates to be once my lease is up for renewal?
- Where is the domestic market heading for my (or my customers') products, and how will economic trends affect my portfolio?

Questions that address multiple influencers of a railcar investment, such as railcar supply and commodity demand are welcome in the world of market research. Care is needed to contextualize questions in the right timeframe (e.g. forward looking vs. backward looking) as historical cycles may be predictors of future cycles. In addition, the context of the economic situation during a given time period and the knowledge of the specific dynamics facing a particular car or commodity segment may significantly illustrate the rationale for past market performance yet may not be the predictor of future performance for the same reason.

Allegories and answers. Primary and secondary sources may seem to address some questions, but must be further evaluated utilizing data,

which may corroborate or discredit the likely answers. When my team and I evaluate our sources and data sets, we ensure that we are comparing apples to apples as one shipper's mechanical preferences may not be appropriate for another. For example, a manufacturer of a liquid product may prefer to use tank cars that have a top unloading system solely because of the infrastructure its marketer established many years ago, while its competition is primarily using a bottom unload car. Digging deep and asking the right questions, then comparing those responses to real data can impact a client's decision. The number of interviewees is as critical in forming a well-rounded understanding of preferences, as is the accuracy and relevance of the information collected.

Railcar characteristics, or demographics, when grouped into meaningful categories, inform the prospective buyer or seller of a particular railcar's statistical grouping (surplus/ deficit, age bucket, ownership over time) in the market and those characteristics can be further grouped into levels of attractiveness and risk. These demographics may prepare management to begin thinking about the future of its investment portfolio in support of one car type and divestiture of another.

Magic observed. The true magic of market research and data analytics is the ability to segment the data to glean new insight and trends. Deep analysis of demographic trends might uncover another level of segmentation. For example, we were assessing the population of a particular general purpose tank car for a given commodity and discovered that an alternative commodity was being shipped in similar sized cars. By assessing the load limit, gallonage capacity, the average density, loading and traveling temperatures, and a handful of other variables, our analysis revealed an overlap with another liquid from a completely different market, affecting the client's assumptions of available tank cars to acquire or lease. With our team of analysts, we matched data from a variety of sources to reveal a potential remarketing opportunity for our client.

The future of market research. AllTranstek Strategic Services is constantly evaluating new data sources, analytical tools and approaches for insight that the rail equipment community is not able to get anywhere else. The future is indeed very exciting for market research in rail.

Contact Nicole Lev Ross at levross@alltranstek.com.

APPENDIX B UPDATE

Proposed changes to MSRP C-III (M-1002) Appendix B were announced by the AAR on May 1, 2018 in CPC-1332. The changes may have a profound effect on the rail industry, particularly for tank car repair facilities, suppliers, and car owners. Participants in the rail industry must know and understand these potential changes in order to stay compliant with AAR requirements and federal regulations. The planned implementation date for changes to Appendix B is January 1, 2019.

Appendix B sets the precedent for how tank car repair facilities achieve and maintain certifications. The proposed amendments would require additional certifications for the production of certain tank car components. Facilities will need to be certified to manufacture certain components, whereas no certification is required today.

One concern expressed by many within the industry is the cost and time related to implementing the necessary changes to achieve and maintain compliance. In some cases, adherence to the proposed changes may be cost

prohibitive for a supplier and the supplier may elect to discontinue production of a given part entirely. Another equally pressing issue is the question of how the changes to Appendix B will be phased into currently certified repair facilities, as existing facilities will need to adhere to the proposed changes.

The AAR is soliciting comments regarding the proposed changes through 5:00 PM EDT on June 30, 2018.

AllTranstek is seeking clarifications on behalf of clients and industry peers. Submit your questions to info@alltranstek.com. A replay of the recent "Appendix B: What it means for you" webinar, originally broadcast May 30, 2018, will be available online Friday, June 8, 2018. The webinar provides greater detail on the specifics of the changes as well as an extensive Q&A segment addressing viewers' concerns.

INDUSTRY FEATURE



FTR has served as the industry leader in freight transportation forecasting in North America for the shipping, trucking, rail, intermodal, equipment, and financial communities for nearly thirty years. FTR's team of experts have over 250 years of combined experience in the transportation industry and leverage that knowledge to provide qualitative analysis with historical and modal-specific insights. The reports, data, commentary, and insights that FTR provides help its clients evaluate market risks, identify new opportunities, and make informed decisions.

Most readers will know FTR from the Closer Look Series that is co-published with AllTranstek, but FTR is also well known for being the only company with a complete set of freight data for all modes of transportation with detail at the 3 Digit STCC commodity level. FTR tracks and forecasts 200+ unique commodity groups both quarterly and annually using its proprietary **Freight•cast** U.S. freight transportation model. Standard reports include both freight focus and equipment focus series as well as

custom report options and premier consulting services to work directly with forward thinking businesses.

FTR's experts travel extensively to conferences and meetings throughout North America giving presentations, as well as hosting its own annual conference in Indianapolis this September. The FTR Transportation Conference brings together all the different aspects of the freight transportation world into one place. With over 80 speakers and panelists, and 450 attendees, the conference is the premier transportation forecasting event of the year.

Companies and individuals can learn more about FTR at www.FTRintel.com and can find more details about the FTR Transportation Conference at www.FTRconference.com. To contact FTR, you can call 888-988-1699 or email FTR@FTRintel.com.



SCHEDULE OF EVENTS 2018

JULY

16-17: Midwest Association of Rail Shippers Summer Meeting
Lake Geneva, WI

AUGUST

15-16: AWS TAC Meeting
Ft. Collins, CO

SEPTEMBER

11-13: FTR Conference
Indianapolis, IN

11-13: Mechanical Association Railcar Technical Services (MARTS)
Nashville, TN

24-26: Arbitration & Rules Committee Meeting
Omaha, NE

24-27: The Chlorine Institute Meetings

Baltimore, MD

24-26: ASLRRR Southern Region Meeting

New Orleans, LA

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THANK YOU FOR JOINING US

At the Spring 2018 Tank Car Committee Meeting in Atlanta, GA, AllTranstek cohosted Casino Night with American Railcar Industries, Hempel, Rescar, Trelleborg, and VSP Technologies. On behalf of all the sponsors, AllTranstek would like to thank everyone who attended and contributed to the success of the event.

DON'T MISS OUT!

Receive AllTranstek's Rail-Blazers newsletter, invitations to free webinars, and notifications about breaking industry news by [joining our mailing list](#).

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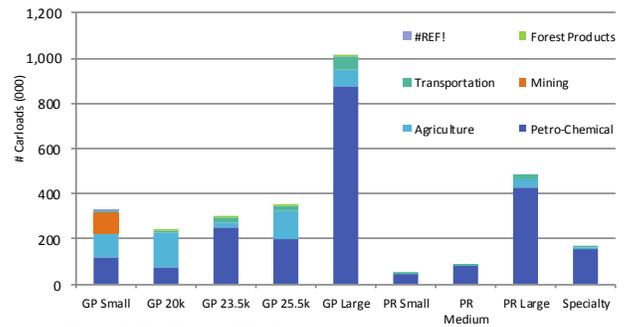
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The majority of tank car traffic moves in GP and Pressure cars, combining to total 93.7%. The remaining 6.3% moves in Specialty cars. The Large GP fleet moves 33.5% of all tank car traffic, primarily ethanol and crude petroleum shipments. Chemicals and petroleum products combined represent 74.2% 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, 99.4% 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.

Historically, the tank car fleet has been the most stable of the six major North American railcar types in terms of deliveries. The fleet remains relatively young as the median age and average age, 12.0 and 14.7 respectively, of this fleet have decreased due to investment in recent years. Almost 60% of the tank car fleet was built within the past 15 years.

Tank Car Traffic by Equipment Type
2017e Carloadings



Source: STB Waybill, FTR, AllTranstek; 3,009,252 carloads

Utilization for tank cars, which bottomed at 50.4% in 2001, has averaged 76.9% since in the past ten years, with 2017 at 66.0%. 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 crude 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 2018 Tank Closer Look Report

CLOSER LOOK SERIES

Curious to know if there will be a surplus of railcars? Interested in learning how many railcars are expected to be retired over the next five years? Find guidance for over 60 freight car and tank car segments by purchasing the complete AllTranstek/FTR 2018 Closer Look Series. The Series is broken down into six reports, each focusing on one of the major North American railcar types further segmented into easy-to-understand railcar categories that includes a data metrics snapshot for your next management presentation or conversation starter at an upcoming conference.

Valuable car type specific and commodity carload information provides a comprehensive review of current market condition, fleet growth expectations, through 2022 and a host of demographic analysis, such as

- Fleet size and segmentation
- Gross rail load and cubic capacity
- Age profile
- Ownership
- Fleet growth
- Orders, deliveries, retirements, and
- Surplus and utilization.

Learn about the commodity carload traffic that supports the demand for a car type, including

- Carload traffic 2000-2022
- Current and forecast freight volumes
- Key commodities by fleet segment
- Shipment trends, and
- Trips per year.

New commentary in 2018 includes market condition summaries for each car type subsegment and AllTranstek's unique Car Pressure Demand Index, which illustrates supply/demand pressure across car types.

Reports are available for purchase separately or as a series. To purchase, contact Helen Lile at hlile@frintel.com or 888.988.1699 x 1.

For more information on report content and the multitude of ways its content can benefit your strategic planning and growth, contact Nicole Lev Ross at levross@alltranstek.com or 630.743.2364.

EMPLOYEE SPOTLIGHT

NICOLE LEV ROSS VP, STRATEGY & CONSULTING

Nicole leads the Strategic Services team and has an extensive business strategy and consulting background. Nicole joined AllTranstek to expand its strategic services practice by providing industry leading market research, analytics, forecasting, and rail-related consulting across the railcar supply chain. Nicole directed corporate development at Freight-Car America and was responsible for sourcing and developing acquisition targets and partnerships and leading company-wide strategic planning activities. She sourced and led the company's first acquisition, a rail repair shop network, valued at over \$23 million.

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JOHN HOYT MANAGER, TAX & AUDIT SERVICES

John provides ad valorem tax services to many of our fleet management clients, as well as identifying opportunities that improve client cash flows.

John has extensive financial and tax accounting experience in the railroad industry. He began his career with TTX Company where he presented valuation models before state agencies with the purpose of reducing the ad valorem taxes. After leaving TTX, John worked for several accounting/consulting firms where he continued to represent the clients in the rail industry.

John's arrival at AllTranstek marks the beginning of AllTranstek's Tax & Audit Services group.

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ALLTRANSTEK PRESENTATIONS 2018

WEBINAR

Driving Fleet Decisions with Data

Date: June 27, 2018

Effective strategic planning requires a foundation of deep analysis and probing questions. Learn about the different types of market research and criteria for assessing a fleet.

Presented by: N. Lev Ross

WEBINAR RE- PLAYS

CPC-1332

Date: May 30, 2018

This webinar discussed the proposed changes to MSRP M-1002 (C-III) Appendix B.

Presented by: D. Ronzani and L. Loman

Welding

Date: March 28, 2018

This webinar discussed welding compliance and qualification.

Presented by: S. McCullough and M. Unter-meyer

ARBITRATION & RULES COMMITTEE MEETING HIGHLIGHTS

AllTranstek provides brief meeting highlights from the Spring 2018 Arbitration & Rules Committee Meeting at CF Rail Services in Schaumburg, IL. Total Car Repair Billing decreased 3.5% to \$1.97 billion

- Per Railinc, wheelsets continue to account for the greatest amount of repair dollars and total billing
- AAR moving forward with electronic Field Manuals; paper will not be available (date TBD)
- AAR MID indicates biggest exceptions taken are on outbound track, railroad or private shop
- Railinc reported over 6,000 Rule 95 incidents in 2017
- "Knowledge" in Rule 95 A now defined as "this section applies when handling line has **documented** knowledge of damage or loss to any car"; approved for July 2018
- Pressure Relief Valves require Component Identification (CID) Number starting in 2018
- There will be no NARMO in 2018

The single greatest approved rule change this year is regarding Replacement Treaded Wheel Sets (Purchased Core Wheelset). A purchased core wheel set is a turned wheel set that is added to the supply of wheel sets via the pur-

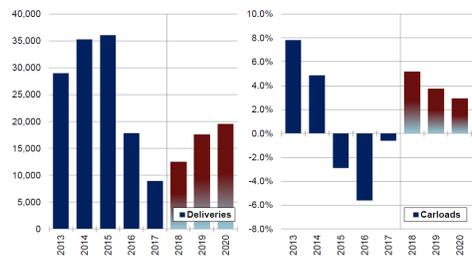
chase from an outside source to fulfill turned wheel set demand. These new wheel sets will reduce the number of new plate mounts and car owners will receive a better mix of repair and return treaded sets, replacement treaded sets, and new mount sets at repair locations. *New replacement treaded wheel sets will save car owners \$15-\$23 million annually.*

- Current AAR Billing reflects only the cost for "tread and return"; material cost excluded
- It is cost prohibitive for railroads to buy turnable wheel sets as there is no way to bill for extra cost of purchase
- AAR estimates 31.6% of all sets are treadable; about 550,000 wheel sets are removed for all causes in North America
- Scrapped cars per year averages 40,000-50,000 cars, generating 160,000-200,000 in wheel sets, 75% of which are reusable as replacement sets
- Addition of new "Purchased Core Wheel Set" scrap cars will be worth \$500-\$800 more
- The CID for these mounts will be that only one piece of the purchased core wheel set can be used for the new CID number
- New turned wheel set is going out for comment in a circular and is being planned for a July 2018 publication.

FTR OUTLOOK: TANK FORECAST

- ◆ **Freight:** Tank car traffic in 2018 is forecast to increase 5.2% y/y to 3,219,600 carloads, then grow at a 3.0% AAGR over 2019-2022 to 3,618,000 by 2022
- ◆ **New Cars:** Deliveries forecast to climb 40.0% y/y in 2018 to 12,525 cars, and 41.1% in 2019 to 17,625, then average 19,300 per year 2020-2022, a 3.9% AAGR.
- ◆ **Inventory:** Retirements projected to increase 19.6% y/y in 2018 to 12,400 cars, and over 2019-2022 average 12,700 cars per year, increasing at a 1.1% AAGR
- ◆ Fleet projected to be flat in 2018 totaling 413,000 cars, but will increase over 2019,-2022 at a 1.5% AAGR to 438,000 by 2022
- ◆ Surplus projected to improve in 2018, falling 22.5% y/y to 108,900 cars, but then increase to 116,200 in 2019 and 132,300 in 2020, before declining back to 127,700 in 2022, a 4.2% AAGR over the 2019-2022 period

N.A. Tank Car Outlook



Source: FTR; Copyright 2018

Tank Car Market Indicators: 2017Q4

Actual, Not Seasonally Adjusted	2017	2017	2017	2017
	Q1	Q2	Q3	Q4
Orders	1,589	4,458	1,046	1,158
% Change, Y/Y	140.8	49.8	18.7	30.3
Backlogs	16,999	18,958	17,685	16,612
% Change, Y/Y	-33.5	-22.4	-17.0	-9.4
Deliveries	2,353	2,245	2,119	2,231
% Change, Y/Y	-60.0	-48.0	-43.7	-42.4
Backlogs/Deliveries Ratio	7.2	8.4	8.3	7.4
Net Orders/Deliveries Ratio	0.7	2.0	0.5	0.5

Source: ARCI Committee of the Railway Supply Institute

- ◆ Fleet utilization is forecast to improve 7.3 points y/y in 2018 to 74.2%, then decline to 69.5% in 2020, before rising to 71.0% in 2022
- ◆ **Forecast Changes:** Higher freight and utilization; lower surplus; no other significant forecast changes
- ◆ **Downside Risks:** Freight weakness, slowdown of retirements
- ◆ **Upside Risks:** Higher tank car replacement demand, economic improve-ment

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.