Railcar Orders, Deliveries, and Backlog

Though not Near Levels of 2014/2015 Peaks, Orders and Backlog Increased in Q2 2018
Railcar Delivery Forecast

Returning Railcar Demand in the Energy & Downstream Markets Should Improve Deliveries

<table>
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</thead>
<tbody>
<tr>
<td>Freight Car Deliveries</td>
<td>48,391</td>
<td>36,015</td>
<td>42,642</td>
<td>43,075</td>
<td>43,825</td>
</tr>
<tr>
<td>Tank Car Deliveries</td>
<td>17,841</td>
<td>8,948</td>
<td>11,527</td>
<td>19,425</td>
<td>19,750</td>
</tr>
<tr>
<td>Total Railcar Deliveries</td>
<td>66,232</td>
<td>44,963</td>
<td>54,169</td>
<td>62,500</td>
<td>63,625</td>
</tr>
</tbody>
</table>

Source: ARCI and FTR (September 2018 Forecast)

- After bottoming out at ~45K deliveries in 2017, improving covered hopper and tank car demand is expected to drive growth over the next few years
- Covered hopper deliveries are expected to grow due to near-term demand for >5,500 c.f. cars and improving demand for 3,500-5,500 c.f. in the longer-term
- Tank car delivery is expected to be strong by historical standards, but well off the production pace during the shale boom
- As of Q2 2018 there were 24,154 tank cars in the industry backlog, likely driven by higher tank car replacement demand and economic improvement
Coal

Coal carloads starting new normal after 2016 lull

- While improved from 2016, coal carloads remained depressed with low natural gas prices, coal plant closures, and environmental regulations all acting as headwinds
- 17.5% of open hoppers and gondolas are currently in storage and empty
- EIA forecasts coal production to decline by 1% to 768 million short tons (MMst) in 2018, despite a 10% increase in coal exports

Coal Carloads

*STCC Codes starting with 11  Source: AAR
Biofuels

Ethanol by rail has moderated since Q1 2017 peak

- The USDA forecasts a nominal increase in U.S. fuel ethanol production in 2018
- Tariffs and trade restrictions from China and Brazil could also weigh on biofuel demand
- Of the 32,860 railcars that moved ethanol in Q1 2018, 56.9% were DOT 111s, 9.2% were CPC-1232s, and 33.3% were built to the DOT-117 standard
- Other biomass-based diesel products are expected to grow 11% in 2018/2019 season

Ethanol by Rail (Thousand Barrels)

*STCC Codes starting with 28184  Source: EIA
**Crude Oil**

*STCC Codes starting with 131  Source: EIA

**U.S. CBR expected to remain down while Canadian CBR expands**

- U.S. CBR movements have dropped by over 62% from their peak as of Q4 2017
- Crude oil exports (allowed as of December 2015) created more incentive for pipeline utilization to the Gulf Coast
- Due to lack of new pipeline capacity, Canadian crude oil carloads are expected to improve significantly over the next 2-3 years
- Railcars used to transport crude oil has dropped by over 35K from the 2014 peak
- 62.6% of all railcars used to transport crude oil in Q1 2018 were CPC-1232s while 32% were DOT-117s

**Crude Oil by Rail (Thousand Barrels)**
Mexico’s energy liberalization likely to drive carloads of petroleum products in 2018

- U.S. carloads of petroleum products excluding crude have rebounded, but remain 16% below peak levels last seen in Q4 2014
- Domestic fuel consumption is not expected to drive growth in the U.S.
- Energy liberalization in Mexico is expected to provide opportunity for U.S. fuels, but there is some uncertainty due to recent election results in Mexico

*Includes crude oil and petroleum products

Source: EIA
North America remains an advantaged geography for chemical production

- North American polypropylene projects are planned between 2020 and 2022 to exploit the continent’s low cost inputs and high margins

- Export opportunities and the petrochemical capacity build out underway will drive up demand for natural gas liquids (i.e. propane and butane)

### Total NGLs by Rail (Thousand Barrels)

*STCC Codes starting with 2912

Source: EIA
Frac Sand

Frac sand by rail continues to grow but faces challenges from in-basin brown sand

- Industrial sand deliveries hit the bottom in Q1 2016, but are up 43% since then
- In-basin Permian sand is expected to impact sand car loadings in 2H 2018, some suppliers are opening mines in West Texas this year
- As of Q2 2018 there were 11,912 small cube covered hoppers in the industry backlog

Non-Metallic Mineral Car Loadings

*STCC Codes starting with 14

Source: AAR
DOT 117J & 120J200 Fleet Growth

Fleet size increased by 562 Cars in July or 3%

Note: Of the cars added in July 2018, 301 were built in 2014 or 2015 as 111s and reregistered as 117J specification tanks.

Based on 8/1/2018 UMLER
DOT 117R Fleet Growth

Fleet size increased by 1272 cars in July or 10.2%

Based on 8/1/2018 UMLER
Based on Q1 2018 Numbers the Number of Cars that Need to be Replaced/Retrofit to DOT-111J or DOT-117R by Service/Date

<table>
<thead>
<tr>
<th>Commodity Category</th>
<th>Compliance Date</th>
<th>Number of Cars</th>
<th>Cars per Month</th>
<th>4th Qtr 2017 Cars per Month</th>
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</thead>
<tbody>
<tr>
<td><strong>Crude Oil</strong></td>
<td></td>
<td></td>
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<tr>
<td>Non-Jacketed DOT-111's</td>
<td>1/1/2018</td>
<td>3</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Jacketed DOT-111's</td>
<td>3/1/2018</td>
<td>45</td>
<td>NA</td>
<td>61</td>
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<tr>
<td>Non-Jacketed CPC-1232's</td>
<td>4/1/2020</td>
<td>1,066</td>
<td>44</td>
<td>167</td>
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<tr>
<td>Jacketed CPC-1232's</td>
<td>5/1/2025</td>
<td>8,662</td>
<td>102</td>
<td>130</td>
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<tr>
<td>Total Crude Oil</td>
<td></td>
<td>9,776</td>
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<tr>
<td><strong>Ethanol</strong></td>
<td></td>
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<tr>
<td>JKT &amp; Non-JKT DOT-111's</td>
<td>5/1/2023</td>
<td>18,701</td>
<td>307</td>
<td>400</td>
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<tr>
<td>Non-Jacketed CPC-1232's</td>
<td>7/1/2023</td>
<td>2,021</td>
<td>32</td>
<td>43</td>
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<tr>
<td>Jacketed CPC-1232's</td>
<td>5/1/2025</td>
<td>1,006</td>
<td>12</td>
<td>10</td>
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<tr>
<td>Total Ethanol</td>
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<td>21,728</td>
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<tr>
<td><strong>Other Flammable Liquids</strong></td>
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<tr>
<td>Packing Group I</td>
<td>5/1/2025</td>
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<td></td>
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<tr>
<td>Packing Group II &amp; III</td>
<td>5/1/2029</td>
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<tr>
<td><strong>Total Other Flammable Liquids</strong></td>
<td></td>
<td>25,892</td>
<td>195 - 305</td>
<td>235 - 364</td>
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<tr>
<td><strong>Total All</strong></td>
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<td>57,396</td>
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