

Crane Commentary:Q2 2018 Update

Crane Market Conditions

Crane values last peaked in 2008, and since that time, the crane industry has undergone various periods of contraction and expansion. In tandem with the rest of the economy, there was a precipitous decline in crane values from late 2008 through 2009, followed by a period of stagnation through 2012. Starting in late 2012, tower cranes began a rapid ascent in valuation in connection with the commercial and residential housing construction boom. For most other crane categories, a slight uptick in value began in 2014 and lasted through 2015, in response to increased demand for energy and power projects. In 2016, these crane categories began another decline related to oil prices and this trend persisted throughout most of 2017 in the climate of decreased rental rate, utilization, and equipment values.

While 2017 primarily demonstrated an accelerated trend of declining crane values, late 2017 started to show signs of stability as equipment values began to firm up. In February 2018, Ritchie Bros held two relatively large auctions in terms of crane sales, totaling 200 crane assets and approximately \$32m in sales proceeds. The value achievement at these auctions were to a small degree lower than market values from late 2017. The market read thus far through Q2 2018 is one of continued stability, and it appears used equipment values have bottomed for most mobile crane categories.

Over the last 4-5 years, large mobile crane values have been closely tied to activity in both the traditional and alternative energy sectors, and there has been some correlation between oil price changes and mobile crane values. Because many crane types are used in energy-related industries, as the price of crude oil adjusts either upward or downward, crane values may follow suit. Coming out of the economic bottom in 2008-2009, crude oil recovered and remained stable until 2014, and this period witnessed a recovery of the crane industry and equipment values.

The first leg of oil price declines in late 2014 (from ~\$110 down to ~\$50) had a meaningful impact on overall utilization trends and rental rate achievement for several players in the crane rental space, particularly those with material exposure to upstream oil and gas projects. However, the persistence in oil price declines did not impact the used equipment markets in a material way until 2016, at which point Rouse began to see downward pressure in equipment values, which persisted throughout 2017.

At the tail end of 2017, oil prices broke the \$60/barrel mark and have continued an upward price trend. Through Q2 2018, oil has reached the upper \$60 to low \$70/barrel price point. These oil price trends are encouraging for the industry, but are well off the highs of 2014.

Amid this backdrop, many industry players focused on reallocating fleets into markets with more robust demand while maintaining good discipline over their fleet management. Although there have been consistent levels of activity across a variety of end markets (plant maintenance, repair, and retrofitting work, wind energy, and infrastructure), the combination of decreased oil prices and slower non-residential construction spending growth placed downward pressure on utilization, rental rates, and equipment values in 2017. Toward the tail end of 2017 and now in early 2018, it appears that utilization has slightly improved, but rental rate has mostly remained competitive.

In terms of secondary market sales, crane values began stabilizing in late 2017, and are now holding through Q2 2018. There are early signs of used crane values increasing off the lows, however additional market observations going forward through the year will indicate if prices will persist on this trajectory.

Key Trends: Utilization, Rental Rates, and Equipment Values

Based on conversations with over 10 major North American crane rental firms, Rouse has identified the key utilization trends, by crane type, experienced broadly across the industry. Throughout most of 2017, utilization remained weak due to the lack of availability of substantial project work. Toward the end of 2017 and continuing into 2018, Rouse observes utilization increasing for all-terrains, rough-terrains and truck-mounted cranes, while crawler utilization remains a bit low. Tower cranes, which are seeing consistent demand and full order books for as much as 18 months ahead, continue to show a strong utilization environment. The key trends are summarized in the table below.

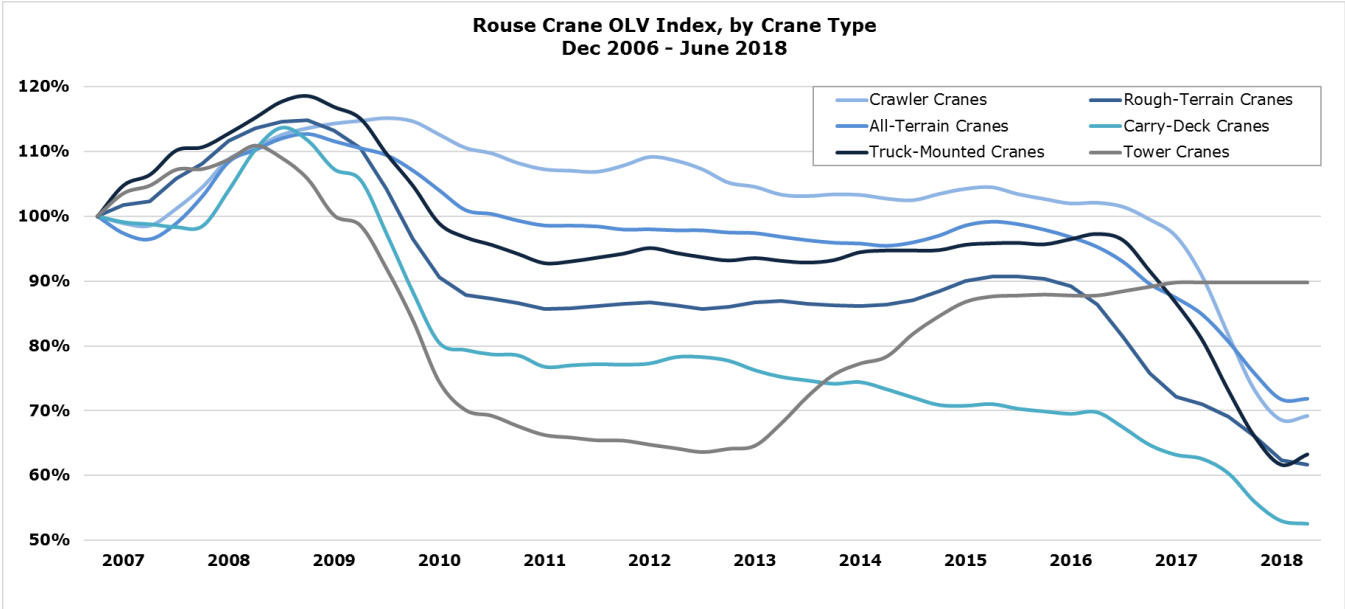
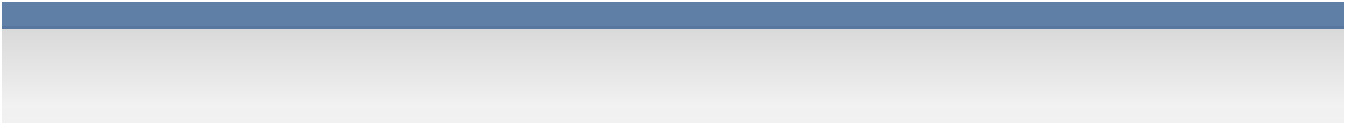
Crane Category	Utilization Trend	Notes
Tower Cranes	Continued high trend	Non-res construction strong; full order books
Crawler Cranes	Low utilization; trend flattening	Competitive environment, demand has been weak
All Terrain Cranes	Slightly increasing	Upstream oil/gas exposure drove low utilization; recently crude oil up and demand is slightly increasing
Truck-Mounted Cranes	Slightly increasing	High upstream oil/gas exposure drove low utilization; recently crude oil up and demand is slightly increasing
Rough Terrain Cranes	Slightly increasing	High upstream oil/gas exposure driving low utilization; recently crude oil up and demand is slightly increasing

Subsequent to the oil price declines of 2014-15, cranes began to come off of long-term project work 12+ months later. After this, for a sustained period, utilization remained weak for all mobile crane categories. Toward the end of 2017 and now early in 2018, there has been an uptick in utilization for several mobile crane categories. Most recent data suggest that time utilization is slightly improving for all-terrain, rough-terrain, and truck-mounted cranes, while crawler cranes have continued to see low utilization, though the trend is showing early signs of stability.

As utilization declined in the period mentioned above, Rouse observed a simultaneous downward pressure on rental rates. Due to high competition, crane rental companies reduced rental rate or provided other margin-reducing incentives such as free freight in order to win project work.

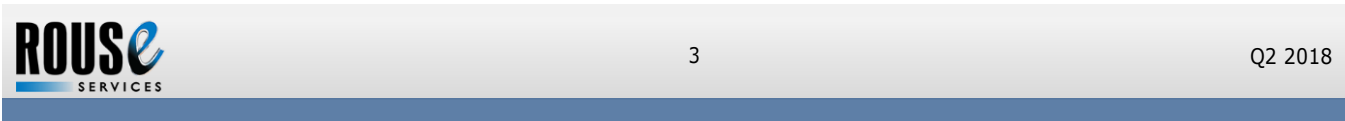
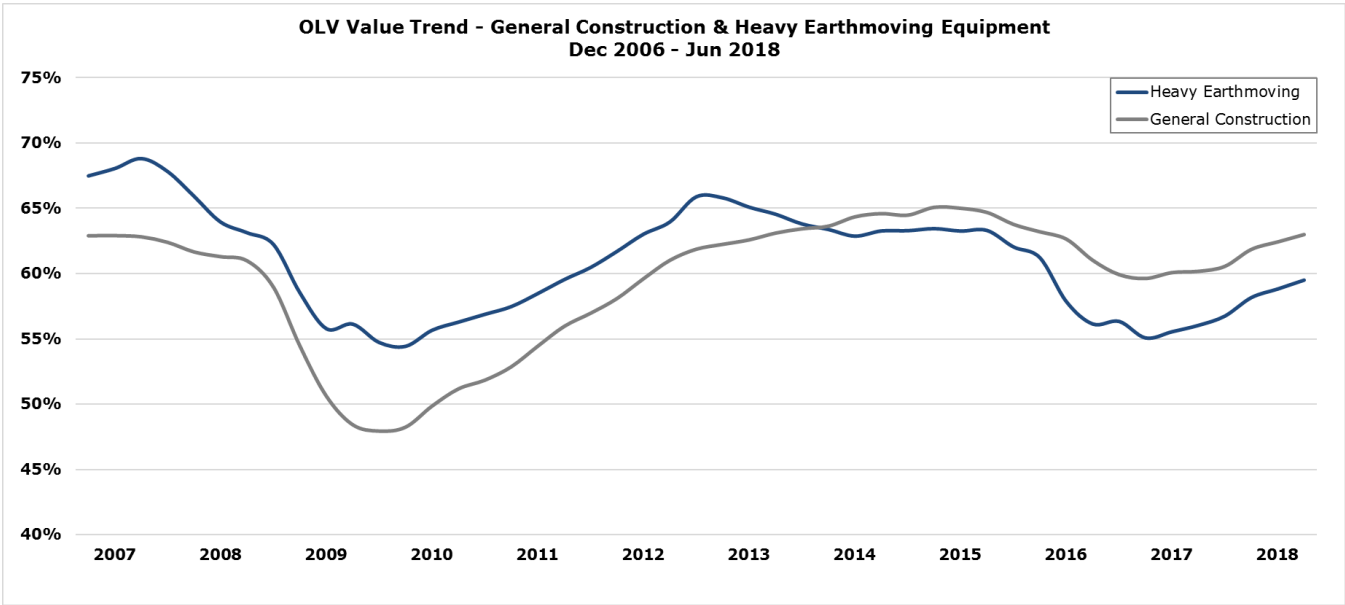
Most recently in 2018 there have been some small increases in rental rate in select pockets of work, but the overarching theme has been one of continued competition in terms of rental rate. While the slight uptick in utilization for some categories and the select rental rate increases are small, positive signs for the industry, there still is not a broad-based recovery in rate or utilization.

In connection with the more challenging utilization and rate environment, Rouse observed consistent and material weakening in used equipment valuations throughout 2016; this was most evident in the auction markets. Through the majority of 2017, Rouse observed an accelerated downward trend in equipment values. Within the auction market, this has been a theme for the mobile crane set of rough terrain, all terrain, and crawler cranes. Within retail sales channels, Rouse observed a slight bit of underperformance across the broader asset category, with all-terrains and crawlers exhibiting the most notable underperformance. Overall, mobile cranes displayed approximately a 15%-20% decline on an OLV basis since the peak in 2015 through 2017. Rouse also tracks an OLV index by crane type. As indicated by the index on the following page, the same patterns hold true across the various crane types.



Relationship Between General Rental Equipment Values and Crane Values

Lastly, Rouse tracks OLV trends across the broader, general construction equipment environment. One useful comparison point is the downturn in 2009. Although all asset classes experienced a decline in 2009, there is an important relationship observed between the general equipment market and the crane rental market: Rouse notes that the downturn in crane values occurred with a lag of approximately 12-18 months as compared to general rental equipment categories. This is notable considering what Rouse has observed in the general equipment market since May 2015 (see Rouse General Construction OLV Value Trend below). Since that time period, values have declined on average by approximately 8-15% (varying by category), and the more recent pains seen across the crane segment appear to correlate to a similar time lag that was experienced in the prior downturn. Throughout 2017, the general construction curve flattened and started to increase with that trend continuing through mid-2018. Through Q2 2018, there are early indications that values may have bottomed for all-terrains, crawlers, and truck-mounted cranes while the rough-terrain secondary market continues to show stability.



OEM & Dealer Trends

Throughout the most recent downturn, crane manufacturers across the globe have reported a predominantly challenging environment for mobile cranes across their production lines. However, the latest reports from a number of manufacturers have been mostly positive, with double digit percentage increases in sales. The results are coming off significantly reduced sales numbers, so they should be considered with a bit of caution.

Mobile Cranes

Below is a summary of recent publicly reported sales figures from several manufacturers.

Manufacturer Revenues – Period Over Period

OEM	2016	% Δ Y/Y	2017	% Δ Y/Y	2018	% Δ Y/Y
Terex	357.4	-16.4%	303.8	-15.0%	335.3	10.4%
Manitowoc	427.4	5.1%	305.8	-28.5%	386.1	26.3%
Liebherr	2,072	-4.0%	2,057	-0.7%	N/A	N/A
Tadano	41,987	-7.1%	35,231	-16.1%	34,894	-1.0%

*Above figures are for the most recent period of financial results available at time of writing.

-Terex: Quarterly results for Q2 of each year (June 30). Figures represented in millions of dollars.

-Manitowoc: Quarterly results for Q1 of each year (March 31). Figures represented in millions of dollars.

-Liebherr: Annual results ending Dec 31 each year. Figures represented in millions of euro.

-Tadano: Quarterly results for Q1 FY, ending June 30 of each year. Figures represented in millions of yen.

*Terex results for Cranes division only.

*Liebherr results for Mobile Cranes division only.

OEM results are promising through 2018, however, results are still below what was observed in a stronger market in 2016.

In North America, Terex Corporation announced Q1 2018 sales increases of 25% and backlog of 54%. CEO John Garrison noted that their Cranes division had a slower start than anticipated due to challenges with their supply chain and mobile crane operations. Sales for the Cranes segment increased 19% year-over-year for Q1, but this was noted as being lower than expectations. It is expected that Cranes will perform at an operating loss in Q2'18 before returning to profitability in the second half of the year. Terex notes that global crane markets have been stable with pockets of growth. Rough-terrain crane markets have not been robust in North America, while all-terrains have shown improvement. Backlog has not improved with large crawler cranes.

Manitowoc reported Q1 2018 net sales of \$386m, up 26% year-over-year. Orders were up 10% from the comparable period in 2017. Barry Pennypacker commented that Manitowoc is seeing signs of a gradual recovery in the crane market with strength in commercial construction and energy end markets. Rental utilization displayed encouraging signs with work in the field for towers, all-terrains, and crawlers. However the rental rate environment has remained competitive.

The challenging but stabilizing environment is not limited only to the North American markets, as seen by recent reporting results of The Liebherr Group and Tadano Global.

Liebherr posted the strongest turnover in the company's history in 2017, but upon closer examination, the mobile crane segment posted flat sales results relative to 2016. For mobile cranes, in terms of geography, Asia and Australia showed significantly increased sales, the Middle East had significantly decreased sales, and Europe and North America sales were relatively flat.

Tadano has stated in its most recent annual report through FY2017 (Apr 17 – Mar 18) that net sales were ¥173.7b, down 3.3% compared to 2016. Mobile crane net sales were ¥99b, down 9.7% year-over-year. The latest May 2018 briefing indicates there is a delay in demand recovery outside of Japan, a fall in demand for rough-terrain cranes, all-terrain crane growth challenges, and competition from Chinese manufacturers for truck cranes.

Tower Cranes

In light of the continued, stable commercial construction market activity, demand for tower cranes continues to exhibit strength in both North America and Europe. Manitowoc reported stronger than anticipated order intake levels in Q4 2017, positioning the company well for spring construction projects. In Q1 2018, Manitowoc commented that global demand and backlog in the tower business line may exhibit an opportunity for margin expansion.

Liebherr reported a 31.0% increase in revenue in their tower crane business division in 2017 compared to 2016, but the company cites a challenging business climate. There is considerable pricing pressure with a decline in investment outside Europe. Furthermore, there is an industry-wide trend towards more rental and used equipment.

Inventory

Equipment dealers such as H&E Equipment Services have been experiencing robust crane sales for the past two quarters, but the sentiment is that a large-scale recovery is not yet underway. In its latest Q2 2018 conference call, H&E reported a 35.7% increase in new equipment sales to \$46.5m, driven primarily by new crane sales. The company is seeing the strongest activity in the all-terrain market, while rough-terrains are still soft, and crawler demand is spotty.

Conclusions

Rouse continues to monitor secondary-market crane sales, rate and utilization achievement among crane rental companies, end market activity, and OEM trends. The market read through 2017 was one of continued softness across several available metrics including utilization and rental rate achievement. Toward the tail end of 2017, equipment values and OEM/dealer performance began to show early signs of stability. As 2018 unfolds, used crane values are showing early signs of bottoming for all-terrain, crawler, and truck-mounted cranes, while rough-terrain values continue a flattening trend.

In June 2018, Rouse attended the inaugural Tower Cranes North America conference in Miami, FL. Industry players are noting that rental rates have risen back to 2007 levels, and utilization and backlog are looking strong for at least two years. It was noted that new tower crane pricing growth has outpaced rental rate growth over the past several years, reducing ROI in the market. However, overall sentiment was positive, with construction and growth expected to continue in the near-term.

About Rouse

Rouse Services is the leader in construction equipment appraisals, used equipment sales support and fleet management analytics, specializing in the rental sector. Rouse appraises over \$40 billion of fleet and collects over \$7.5 billion of equipment transactions, annually, across North America and the United Kingdom.

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