



# Crane Commentary

## Q2 2019

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# Crane Market Conditions

The recent sales transaction data points through 2Q19 continue to display the pattern of price stability, a market trend that began in late 2017. The lower tonnage crane categories of rough-terrains, carry-decks, and truck-mounted cranes have transacted at steady prices, indicating a flattening value trend. On the other hand, the larger all-terrains and crawlers have slowed in terms of price decline, but the value trends indicate there may be some additional downside risk. On the whole, the crane market appears to be in a stable state considering the heavy declines in value observed following the oil and gas market downturn.

Looking back for historical context, crane values 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, Rouse observed a moderate price increase, which began in 2014 and lasted through 2015. This was 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. Throughout 2018, values primarily demonstrated a stable trend, indicating that used equipment values have bottomed for most mobile crane categories. The market read in Q2 2019 displays a continuing trend of stability across the core mobile crane categories.

Over the last five 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 ~\$35) 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 continued an upward price trend through the first three quarters of 2018. In Q4 2018, oil prices sharply declined to the \$45/barrel range, as concerns of widespread economic slowdown dampened the outlook on future demand for fuel. Oil prices steadily climbed back up, but the latest price data shows a continuing trend of price volatility. Q2 2019 prices have ranged between \$50/barrel to \$60/barrel. The recent sentiment in the oil markets is one of uncertainty as several factors have been impacting the markets including increasing US crude production, global demand, and continuing friction in US-China trade relations. ([Click here for Oil Rig Counts and Crude Oil Prices for more detail.](#))

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, utilization began increasing, but rental rate increases remained challenged through most of 2018. Through Q2 of 2019, the trend of increased utilization and rental rate have continued.

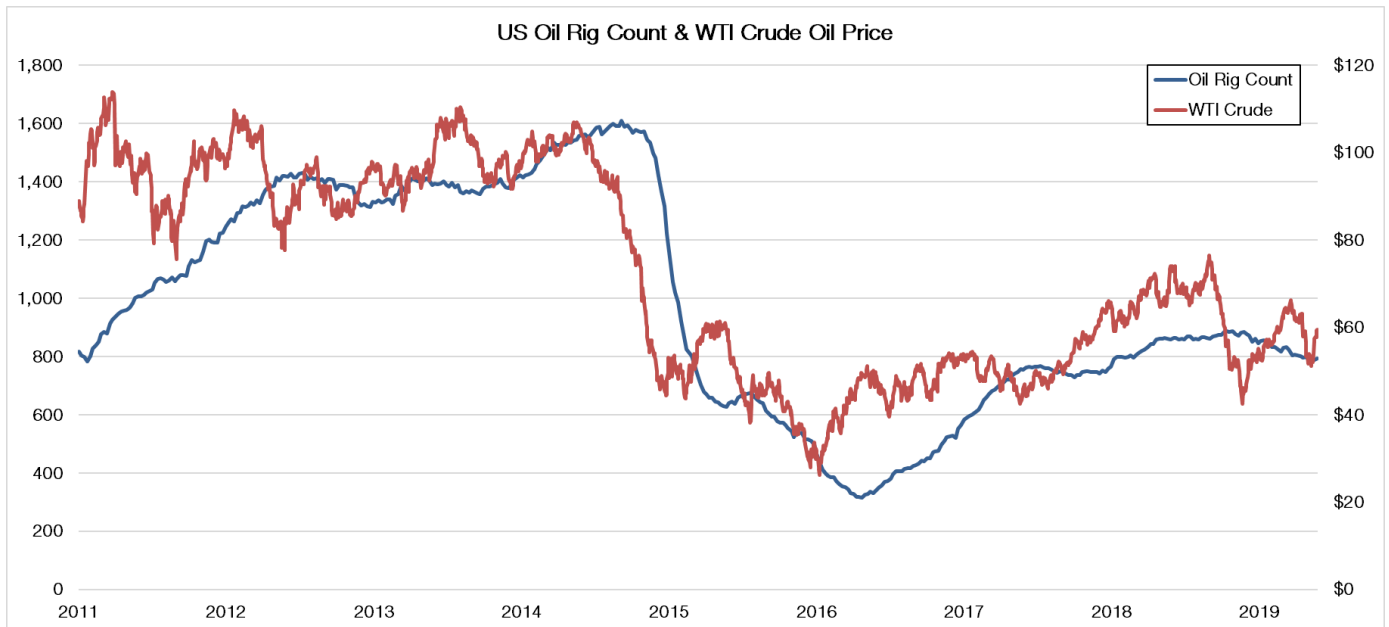
In terms of secondary market sales, crane values began stabilizing in late 2017. Used crane values have mostly held through Q2 2019, with the exception of the all-terrain and crawler crane categories, which have experienced slight softness in values.

# Oil Rig Counts and Crude Oil Prices

Oil rig counts are showing a slight downward trend in Q2 2019 dipping below 800, and oil prices have ranged in the upper \$50's/barrel. As illustrated in the chart below, oil rig count is continuing a fairly flat trend, while oil prices have exhibited some price volatility. The current oil price range represents a slight recovery off the 4<sup>th</sup> quarter dip into the mid \$40's/barrel.

Because the crane rental industry has material exposure to the oil and gas markets, Rouse tracks oil rig counts and crude oil pricing as an indicator of overall market conditions. The population of oil rigs correlates to crane demand, as cranes are needed at oil sites for lifting work, and oil-related projects are among the primary use cases of cranes. As oil rig count and pricing increase, the demand for oil-related project work also increases, which favorably impacts utilization and rental rate for mobile cranes.

As oil prices witnessed substantial declines in 2014-15, oil rig counts correspondingly followed suit, and oil-related crane work substantially declined. These market forces flowed through to used equipment values starting in 2016 and persisted throughout 2017. The current market environment is a slight recovery from the bottom of 2016.



## Key Trends: Utilization, Rental Rates, and Equipment Values

The Q2 2019 utilization read indicates a strong demand environment for all-terrain cranes, and a steady demand environment for other mobile crane categories. Tower cranes have continued with high utilization figures in connection with the robust commercial construction market.

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, Rouse observed utilization beginning to increase for the mobile crane categories. Thus far in 2019, most mobile crane categories have shown a stable utilization trend. 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.

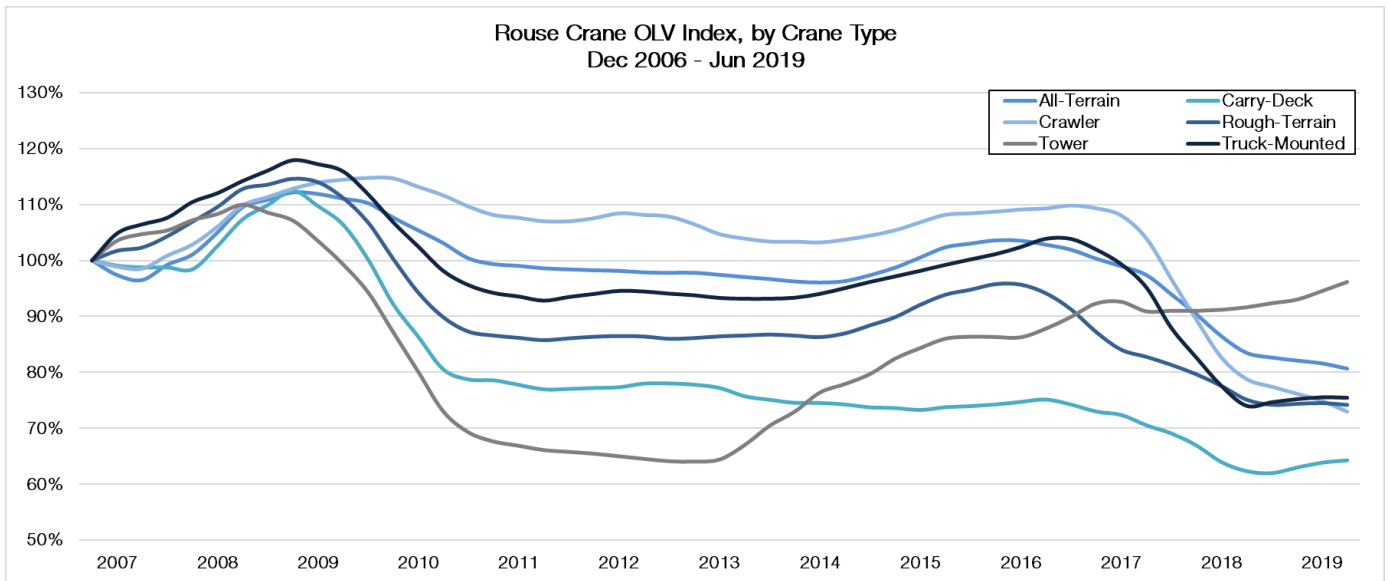
Crane Category	Utilization Trend	Notes
Tower Cranes	High demand	Non-res construction strong; full order books
Crawler Cranes	Stable demand	After Q4 2018 oil price drop, crude oil prices up but volatile in 1H 2019; overall utilization trend remains stable
All Terrain Cranes	High demand	After Q4 2018 oil price drop, crude oil prices up but volatile in 1H 2019; overall utilization trend remains healthy
Truck-Mounted Cranes	Stable demand	After Q4 2018 oil price drop, crude oil prices up but volatile in 1H 2019; overall utilization trend remains stable
Rough Terrain Cranes	Stable demand	After Q4 2018 oil price drop, crude oil prices up but volatile in 1H 2019; overall utilization trend remains stable

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. Starting toward the end of 2017 and persisting through Q2 2019, there has been an increasing utilization trend for several mobile crane categories. Most recent data suggest that physical utilization is continuing at a stable level for the mobile crane categories.

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.

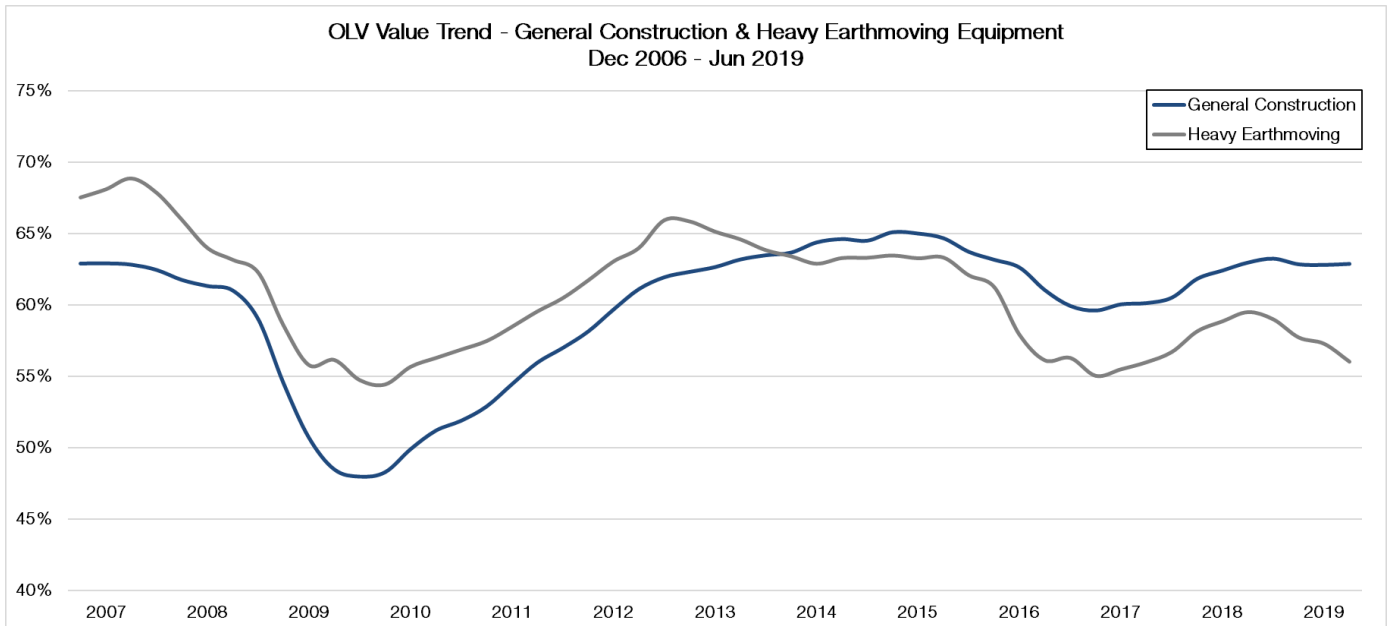
2018 witnessed some small increases in rental rate in select pockets of work, but the overarching theme had been one of continued competition in terms of rental rate. In 2019, there appears to be a continued stabilizing trend for rental rate, though rates are not back at the peak levels when oil was over \$100/barrel. While the uptick in utilization and rental rate for some categories are positive signs for the industry, it does not appear that rate and used equipment values will reach back to pre-downturn levels during the near term.

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. Overall, mobile cranes displayed approximately a 15%-20% decline on an OLV basis since the peak in 2015 through 2017. Starting in late 2017 and continuing through 2018, most mobile crane categories showed signs of bottoming. The most recent data through the first half of 2019 suggest that there is continued stability for most crane equipment types. Rouse tracks an OLV index by crane type as shown on the following page, and this chart demonstrates the value trends that have been observed in the marketplace.



## 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). During 2016-17, values 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 2019, most crane categories have displayed stability.



## Year-Over-Year Auction Sales Volume

Below are two charts compiling the first half-year of sales in 2018 and 2019 in North America. The notable observation is that age of cranes going to the auction market has increased from 175.0 months to 221.9 months. It appears that the market is disposing of older cranes in the auction market compared to prior year, and thus the total sales volume in dollars has declined.

### 1H 2018

Category	Units	Sale Price (USD)	Age (Months)
Rough-Terrain Cranes	241	\$24,202,996	173.3
Crawler Cranes	49	\$16,579,193	175.3
Truck-Mounted Cranes	41	\$6,248,112	163.4
All-Terrain Cranes	26	\$4,605,484	196.4
Carry-Deck Cranes	59	\$1,490,485	170.9
Tower Cranes	1	\$22,000	188.8
<b>Total</b>	<b>417</b>	<b>\$53,148,269</b>	<b>175.0</b>

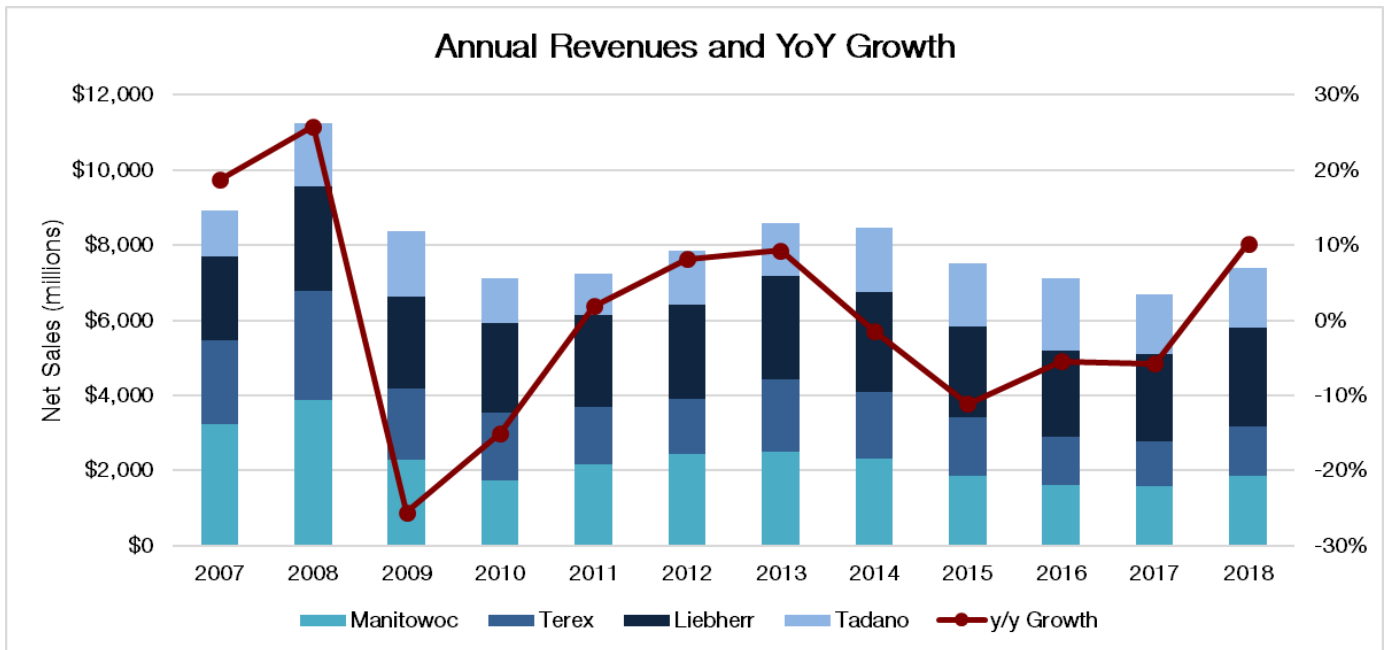
### 1H 2019

Category	Units	Sale Price (USD)	Age (Months)
Rough-Terrain Cranes	217	\$14,471,008	202.2
Crawler Cranes	63	\$8,107,019	280.3
All-Terrain Cranes	29	\$7,723,600	203.4
Truck-Mounted Cranes	73	\$7,548,856	218.4
Carry-Deck Cranes	56	\$1,098,134	182.0
<b>Total</b>	<b>438</b>	<b>\$38,948,617</b>	<b>221.9</b>

## OEM & Dealer Trends

### Annual Revenues

Annual revenues for major manufacturers through 2018 display a pattern similar to the Rouse OLV Index for most crane categories. Although revenue declines have tapered off after the most recent oil downturn, the revenues have not ever achieved back to the 2008 peak.



## Mobile Cranes

Throughout the most recent downturn, crane manufacturers across the globe have reported a predominantly challenging environment for mobile cranes across their production lines. Manitowoc has been working through supply chain and pricing challenges and OEM's have largely reported improving revenue results.

Below is a summary of publicly reported sales figures from several manufacturers in the most recent period.

### Manufacturer Revenues – Period Over Period

OEM	2017	% Δ Y/Y	2018	% Δ Y/Y	2019	% Δ Y/Y
Manitowoc	\$305.8	-28.5%	\$386.1	+26.3%	\$418.0	+8.3%
Liebherr	€2,057	-0.7%	€2,243	+9.3%	N/A	N/A
Tadano	¥99,022	-9.7%	¥117,556	+18.7%	N/A	N/A

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

-Manitowoc: Quarterly results ending 3/31. Figures represented in millions of dollars.

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

-Tadano: Annual results for FY (Apr – Mar) of each year. Figures represented in millions of yen.

\*Liebherr results for Mobile Cranes division only.

\*Tadano results for Mobile Cranes division only.

In North America, Manitowoc reported year ending Q1 2019 net sales of \$418m, up 8.3% year-over-year. The company cited sales increases in North America, particularly in the Gulf Coast, as the primary driver for sales growth. Rental utilization rates are high due to strength in the energy and commercial construction markets. However, there was also mention of a mixed demand outlook as European demand is slowing.

Terex briefly commented in their latest quarterly release that their rough-terrain and pick and carry businesses have performed within expectation, and that the Demag sale should conclude mid-year of this year.

US crane manufacturers and other construction equipment manufacturers have broadly reported on a constrained supply chain. Parts and materials shortages have been crimping manufacturers' ability to produce at a throughput to meet demand. Tariffs have also resulted in material cost increases, and manufacturers have had to adapt their operations to better handle these challenging developments.

The Liebherr Group and Tadano Global have echoed similar themes in their reports, indicating that the business environment outside of North America has been slowing and relatively flat.



Liebherr posted year-end revenues of €2,243 million in 2018, a 9.3% increase compared year-over-year. The company cited a decline in the crawler crane market, especially for large machines, with the underlying cause being a downturn in the wind energy industry. Four to six-axle all-terrain cranes are the most popular products in the mobile cranes division.

Tadano's latest FY results indicate a similar trend as with the other manufacturers. The mobile cranes division sales were ¥117,556 million, an 18.7% increase compared year-over-year.

## 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. Non-residential construction spending continues on an upward trajectory, and there is a corresponding need for tower cranes to support those development projects.

Manitowoc has launched its first tower product in the Chinese market, with the intent of capturing the portion of the market that would be best served by tower cranes with very high development standards. The company has plans to refresh its overall line, and to introduce some new technologies on the higher capacity tower cranes.

Liebherr reported sales of €571 million, a 6.9% increase year-over-year. Expansion in the construction industry worldwide contributed to this increase, with particular strength in Europe, and North America also exhibiting this increasing trend. The primary growth drivers are top-slewing and fast-erecting tower cranes.

## Inventory

Equipment dealers such as H&E Equipment Services have a mixed outlook on the crane industry. In its Q2 earnings call, H&E reported new crane sales were down 27.7% year-over-year, but that there is still some backlog. The company noted that there is some risk of flat year-over-year new crane sales. All-terrains have been popular, while crawler demand has been spotty, and rough-terrain sales are on the lower end of historical levels.

## Conclusions

Through 1H 2019, the data suggest that mobile crane values have mostly continued to show stability in terms of used equipment value achievement. Lower tonnage cranes have been relatively steady, while higher tonnage all-terrains and crawlers appear to have some risk for additional decline.

The market read through 2017 was one of continued softness across several 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. Through 2018, used crane values started showing signs of bottoming for most of the mobile categories.

Rouse continues to monitor secondary-market crane sales, rate and utilization achievement among crane rental companies, end market activity, and OEM trends. In Q4 2018, oil prices declined sharply, and in 2019 prices have modestly recovered but remain volatile. While most rental companies have reported continued stable utilization rates in the most recent quarter, and rental rate appears to be improving, there has not been a corresponding increase in used equipment values.

## 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 \$14 billion of equipment transactions, annually, across North America and the United Kingdom.

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