EquipmentWatch BY RANDALL REILLY MARKET REPORT™

May 16, 2023
UPDATED MONTHLY

Highlights

- Overall equipment values held steady month-over-month. While average FMV and FLV were up compared to previous years, price differentials were less than 2% compared to February 2023.
- Monthly auction activity levels are up due to a seasonal trend and year over year activity levels have increased following a 2022 downturn that seems to be correcting itself.
- Agriculture resale and auction activity decreased its hectic pace but still shows steady growth. The agriculture equipment market continued to rise albeit at a slower level, with 23.3% YoY growth and 3.3% YoY growth on the resale and auction channels respectively.

2023 March vs. **2022** March

Year-over-year changes shown; for more detail jump to the specific fleet page

	FMV	FLV
CONSTRUCTION	↑ 4.3%	↑ 38.4%
LIFT/ACCESS	↑ 13.0%	↑ 42.9%
AGRICULTURE	↑ 11.6%	↑ 31.1%

Current month's values powered by previous month's collected data

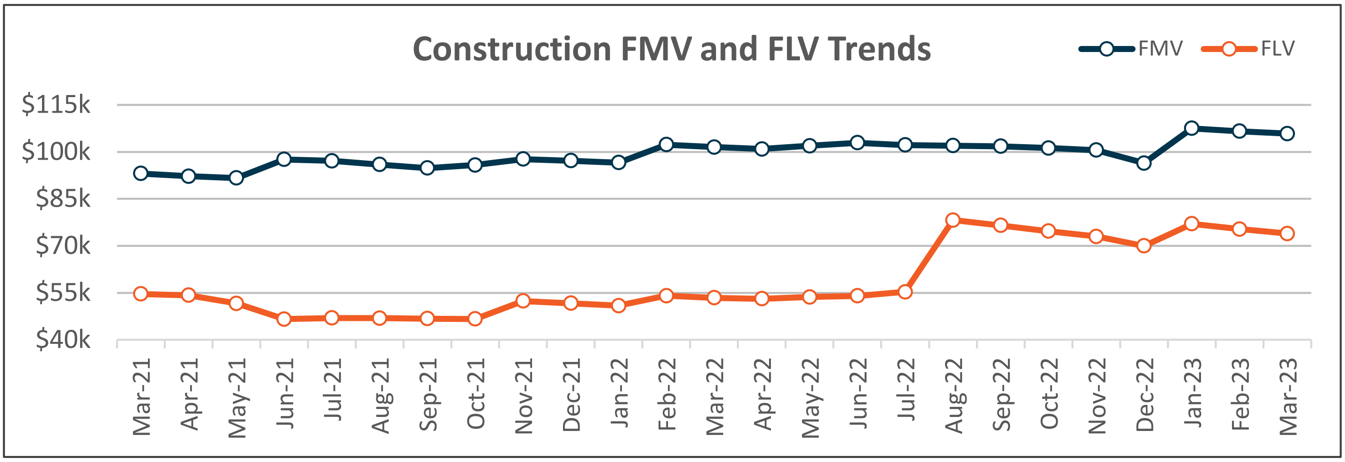
About This Report

The EquipmentWatch Market Report™ is a monthly resource for the construction, lift/access, and agriculture industries to make better-informed decisions by leveraging key equipment values, market activity, age and usage metrics.

Please see the **Appendix** section for more information and a **glossary** of definitions.

Construction

	Resale			Auction		
	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023
Values	↑ 13.7%	↑ 4.3%	↓ 0.7%	↑ 35.2%	↑ 38.4%	↓ 1.9%
Activity[1]	↓ 28.0%	↑ 4.1%	↑ 14.4%	↑ 58.2%	↑ 43.6%	↑ 54.6%
Age	↑ 19.5%	↑ 0.5%	↓ 4.1%	↑ 1.3%	↓ 10.3%	↑ 12.3%
Usage	↑ 15.9%	↑ 6.3%	↑ 0.7%	↓ 11.7%	↓ 15.6%	↑ 15.0%



Resale

Most popular model years and subtypes

Model Year	Prevalence
2017	11.4%
2018	10.3%
2016	9.7%
2019	9.0%
2015	8.3%

Subtype	Prevalence
Crawler Mounted Hydraulic Excavators	15.5%
Compact Track Loaders	11.1%
4-Wd Articulated Wheel Loaders	8.7%
Crawler Mounted Compact Excavators	7.4%
Skid Steer Loaders	5.6%

Auction

Most popular model years and subtypes

Model Year	Prevalence
2015	9.5%
2017	8.7%
2016	8.4%
2018	8.0%
2014	7.6%

Subtype	Prevalence
Crawler Mounted Hydraulic Excavators	13.5%
Compact Track Loaders	12.9%
Crawler Mounted Compact Excavators	9.0%
Skid Steer Loaders	8.0%
4-Wd Articulated Wheel Loaders	7.4%

1) Resale activity based on listings; Auction activity based on sales results

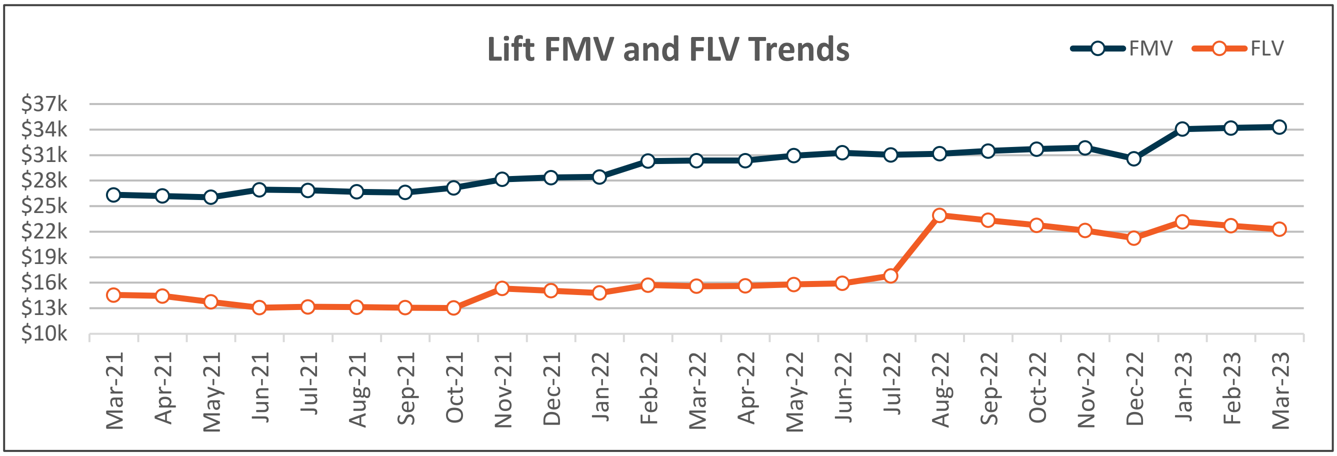
Construction

- Continued growth in the commercial sector and the start of large infrastructure projects continue to drive the construction industry, with slowdowns in residential starts 9% below what they were this time last year. [1]
- Overall, average FMV on the resale channel have been stable with little to moderate growth. Construction equipment values on the resale channel show a 0.7% growth month over month, slight increase over this time last year with 4.3%, and moderate gains over 2021 of 13.7%.
- Construction equipment resale activity remained moderate as well. Activity was 14.4% above February 2023, 4.1% above March 2022, and 28.0% above March 2021. Activity on the auction channel was more robust. Activity increased by 54.6.7% over February 2023 and 43.6% over this time last year.
- The age of the equipment on the resale market was 14.4% higher month over month, but only 4.1% higher than March 2022, with the highest jump up in age of 19.5% compared to March of 2021. The most popular model years on the resale market are 2017 and 2018, similar to the previous month. Continuing to be popular on the resale market are models from 2016 and 2019. Crawler Mounted Hydraulic Excavators and Compact Track Loaders continue to outpace other equipment types in the resale channel, with 4-Wd Articulated Wheel Loaders, Crawler Mounted Compact Excavators, and Skid Steer Loaders also prevalent.
- On the auction side, average values were only 1.9% higher than February 2023, but showed a much healthier gain year over year, with values 38.4% higher than March 2022 and 35.2% higher than March 2021. Similar to last month, auction activity was up month over month. The average age of equipment on the auction channel was 12.3% higher than last month and 10.3% higher than this time last year. The three most popular model years were 2015, 2017, and 2016. Like last month, Crawler Mounted Hydraulic Excavators and Compact Track Loaders made up a quarter of the auction market—with Crawler Mounted Compact Excavators, Skid Steer Loaders, and 4-Wd Articulated Wheel Loaders rounding out the most popular models.

1. Dodge Data & Analytics, Total Construction Jumps in March to Three Month High, Bolstered by Nonbuilding Strength

Lift/Access

	Resale			Auction		
	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023
Values	↑ 30.3%	↑ 13.0%	↑ 0.3%	↑ 53.2%	↑ 42.9%	↓ 1.8%
Activity	↓ 35.0%	↑ 37.5%	↑ 17.2%	↑ 69.6%	↑ 132.6%	↑ 102.0%
Age	↑ 7.9%	↓ 4.8%	↓ 5.6%	↑ 13.6%	↑ 0.9%	↑ 2.7%
Usage	↑ 1.7%	↓ 22.2%	↓ 20.6%	↑ 24.4%	↑ 2.2%	↓ 6.4%



Resale

Most popular model years and subtypes

Model Year	Prevalence
2015	25.3%
2014	21.2%
2016	12.3%
2013	11.9%
2012	6.2%

Subtype	Prevalence
Electric Self Propelled Scissor Lifts	37.6%
Telescoping Boom Rough Terrain Lift Trucks	16.0%
I.C. Self Propelled Telescopic Boom Aerial Lifts	11.5%
I.C. Self-Propelled Articulating Boom Aerial Lifts	7.4%
I.C. Pneumatic Tire Lift Trucks	6.4%

Auction

Most popular model years and subtypes

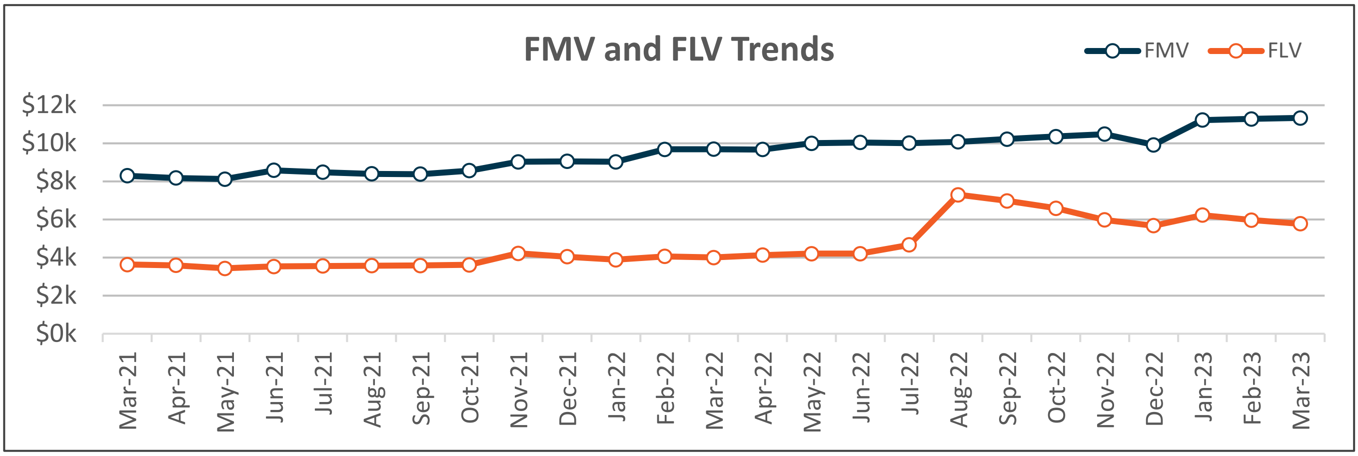
Model Year	Prevalence
2014	19.6%
2013	14.4%
2015	12.7%
2016	8.2%
2012	7.3%

Subtype	Prevalence
Electric Self Propelled Scissor Lifts	35.4%
Telescoping Boom Rough Terrain Lift Trucks	13.7%
I.C. Self Propelled Telescopic Boom Aerial Lifts	12.4%
Electric Self Prop Telescopic Boom Aerial Lifts	9.0%
I.C. Cushion Tire Lift Trucks	6.0%

1) Resale activity based on listings; Auction activity based on sales results

Electric Self-Propelled Scissor Lifts

	Resale			Auction		
	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023
Values	↑ 36.6%	↑ 17.0%	↑ 0.5%	↑ 58.7%	↑ 44.1%	↓ 3.3%
Activity	↓ 73.1%	↑ 65.0%	↑ 40.1%	↑ 123.5%	↑ 245.6%	↑ 116.6%
Age	↑ 11.4%	↓ 0.1%	↓ 0.8%	↑ 12.1%	↑ 3.2%	↑ 7.1%
Usage	↑ 9.5%	↑ 28.4%	↑ 21.3%	↑ 14.9%	↑ 29.6%	↓ 12.8%



Resale

Most popular model years and subtypes

Model Year	Prevalence
2015	43.6%
2014	21.6%
2016	19.5%
2013	5.0%
2012	2.0%

Auction

Most popular model years and subtypes

Model Year	Prevalence
2014	24.7%
2013	18.7%
2015	14.9%
2016	11.4%
2012	6.8%

1) Resale activity based on listings; Auction activity based on sales results

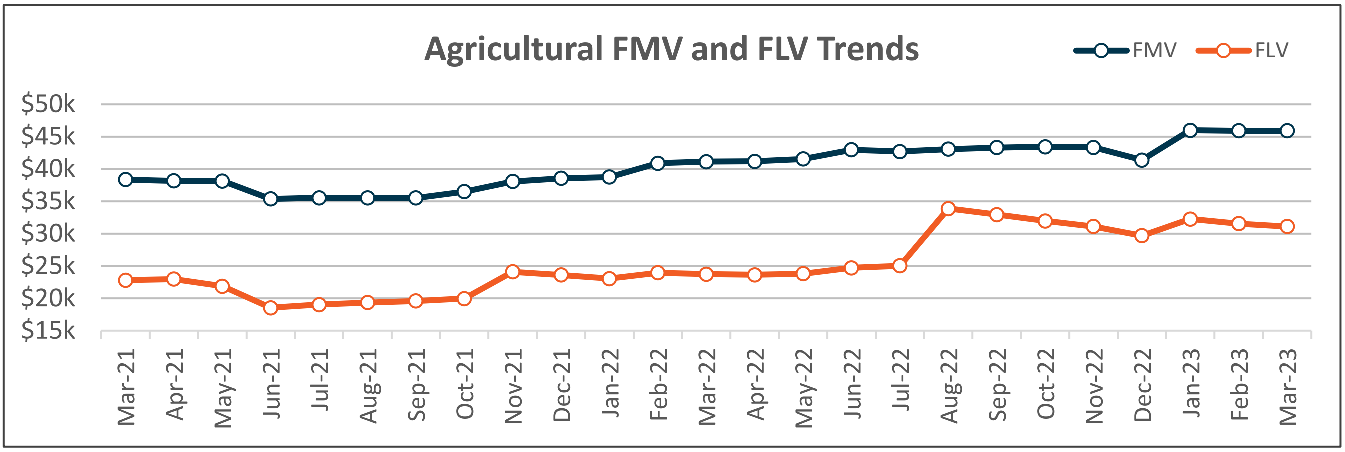
Lift/Access

- Average values for lift equipment were up nominally compared to last year, but have held steady overall throughout the first quarter of 2023. FMV is up 13.0% over March 2022, and 30.3% above March 2021. With FMV holding steady, it's a good indicator that pricing, while still high, is beginning to even out.
- Activity, which showed a slow down last month, was up 17.2% month over month. The average age of equipment was up slightly, 5.6%, compared to February 2023, but was 7.9% higher than in March 2021. The most popular model years on the resale front were 2015, 2014, and 2016, which made up 58.8% of the market combined.
- Similar to last month, Electric Self Propelled Scissor Lifts continued to climb in the resale channel, going from the second most popular subtype to the first this month, accounting for 37.6% of the market. (See below for Equipment Spotlight)
- Shifting to the auction channel, average FLV is up 1.8% over last month, but values have climbed significantly year over year, with a 42.9% increase over last year, and a 53.3% increase over March 2021 values. Activity is up on the resale channel overall.*
- Usage rates are up across the board—24.4% over March 2021, 2.2% above March 2022, and 6.4% over February 2023. The age of equipment on the auction channel is also up. Average age has increased 13.6% above March 2021, 0.9% above March 2022, and 2.7% over February 2023, with the most popular model years being 2014, 2013, and 2015.
- In this month's Equipment Spotlight, we take a deep dive into Electric Self-Propelled Scissor Lifts, the most popular piece of equipment on both the resale and auction channels. FMV for Electric Self-Propelled Scissor Lifts increased only slightly month over month showing a 0.5% increase but have increased significantly year over year, with a 17.0% increase since March 2022 and a 36.3% increase from March 2021. Activity levels remain high, with the most popular model years being 2015, 2014, and 2016 on the resale channel and 2014, 2013, and 2015 on the auction channel. FVL has remained steady so far in 2023, with only modest increases of 3.3% over February, but in a market correction, auction values have increased significantly year over year, showing a 44.1% increase over March of 2022 and a 58.7% increase over March 2012. Average age has increased 12.1% over March of 2021, but shows only moderate increases over March of 2022 with a 3.2% gain and a 7.1% increase over February. Electric Self-Propelled Scissor Lifts have seen increases in usage across all channels, with the largest gain in the resale channel with a 21.3% increase month over month.

*Auction activity levels temporarily inflated due to an increase in internal data collection methods.

Agriculture

	Resale			Auction		
	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023	vs. Mar 2021	vs. Mar 2022	vs. Feb 2023
Values	↑ 19.6%	↑ 11.6%	↓ 0.0%	↑ 36.4%	↑ 31.1%	↓ 1.4%
Activity[1]	↓ 16.0%	↓ 23.3%	↑ 13.5%	↑ 186.0%	↑ 3.3%	↑ 97.4%
Age	↓ 1.9%	↓ 7.1%	↓ 0.2%	↑ 4.0%	↓ 6.3%	↑ 2.5%
Usage	↓ 4.7%	↓ 9.0%	↑ 3.0%	↓ 9.1%	↓ 4.2%	↓ 12.5%



Resale

Most popular model years and subtypes

Model Year	Prevalence
2022	11.3%
2021	8.2%
2018	6.5%
2013	6.0%
2014	5.8%

Subtype	Prevalence
Wheel Tractors	32.6%
Combines	18.7%
Corn Headers	8.0%
Balers	7.2%
Draper Headers	5.9%

Auction

Most popular model years and subtypes

Model Year	Prevalence
2013	7.8%
2012	6.9%
2014	6.9%
2011	6.0%
2009	5.3%

Subtype	Prevalence
Wheel Tractors	41.4%
Combines	14.0%
Balers	6.9%
Planters	5.9%
Self-Propelled Sprayers	5.2%

1) Resale activity based on listings; Auction activity based on sales results

Agriculture

- Agriculture equipment resale values have held steady throughout 2023 showing little to no increase. This is in contrast to this time last year, where values showed a decrease of -8% year over year. Similar to construction and lift equipment, average FMV was steady compared to February 2023. Where we are seeing some market movement is in resale activity which was up 13.5% over February 2023.
- The age of the equipment on the resale market was 7.1% higher than March 2022, but only 1.9% higher than March 2021. However, there was little change (0.2%) from February 2023. The most popular model years on the resale market are 2022 and 2021, indicating a real thirst in the market for slightly used but still recent models. Continuing to be popular on the resale market are models from 2018 and 2013.
- On the auction side, average values were 31.1% higher than March 2022, but only 1.4% above February 2023. Similar to last month, activity was up—3.3% over March 2022. The average age of equipment was 6.3% higher than March 2022 but only 2.5% higher than February 2023. The three most popular model years were 2013, 2012, and 2014.
- Like last month, Wheel Tractors made up a significant portion of the market—32.6%. Combines, Balers, and Planters rounding out the top four most popular equipment subtypes in the auction channel.

Appendix

Introduction

The EquipmentWatch Market Report is a compilation of a wide array of EquipmentWatch's data, designed to bring you an in-depth look at used equipment markets over the last month.

This Appendix is designed to answer your questions regarding this report. Here we define and illustrate how we think about values, market activity, age, usage, and regional influence for the most common types of equipment seen on used markets across North America.

Our Data

Selection Criteria for OEMs and Subtypes

EquipmentWatch tracks Resale and Auction prices and activity for over 15,000 models across 389 manufacturers throughout North America. With over $800 billion in collected equipment transactions, EquipmentWatch is your primary source for intelligence regarding used equipment markets.

The data in this report is divided into three distinct equipment markets: Construction, Lift/Access, and Agriculture.

For each market, we include most of the equipment types and manufacturers that we track. We remove only those types and manufacturers with very low volumes to keep analysis meaningful but also allow for dynamic seasonal market changes.

Construction

150+ manufacturers
125+ equipment types

Lift/Access

70+ manufacturers
25+ equipment types

Agriculture

100+ manufacturers
30+ equipment types

Glossary

Annual Use Hours: Annual Use Hours are the average number of hours per year that a machine performs work as determined by surveying equipment owners.

API: An API, or application programming interface, is a data delivery mechanism that allows for data from one source (EquipmentWatch in this case) to be embedded into the application of a third party. The major benefit to APIs are the following: Workflow efficiency gains Derivative products.

Brand Premium: Brand Premiums are an EquipmentWatch proprietary metric for evaluating the relative price strength of a brand in used equipment markets either at a given time or as an average over a period time. The analysis involves comparing thousands (or millions) of observations from the equipment Resale and Auction channels, holding constant significant factors like equipment age, equipment type, and market. The end result is a ratio comparing the given manufacturers, brands, or models against the entire market.

Calculating Time Basis of Rates: It is the general practice in the industry to base rates upon one shift of 8 hours per day, 40 hours per week, or 176 hours per month of a 30-day consecutive period.

Cost of Facilities Capital (CFC): Cost of Facilities Capital (CFC), which is not the same as interest charges, addresses the cost of money invested, whether the machinery is purchased with cash or financed.

Cost Reference Guide: The Cost Reference Guide is a former EquipmentWatch publication that served as a guide to ownership and operating costs for construction equipment manufactured within the past five years.

Custom Cost Evaluator: The Custom Cost Evaluator is now known as the EquipmentWatch Internal Charge Rate Calculator.

Depreciation: In general terms, depreciation is the loss of fair market value of an asset over time, usually as a result of wear and tear.

Discount: Discount refers to the percent off from list price experienced by the equipment buyer. Including discount as an ownership factor will result in more accurate internal charge rate calculation.

Economic Life Hours: Economic Life Hours reflect the average economically productive life of a machine used under average conditions with normal repairs and maintenance.

Equipment Overhead: Equipment overhead costs include the direct costs of normal risk insurance and property taxes along with the indirect costs of storage, security, mechanics supervision, inspection, licenses, and record keeping.

Glossary

Fair Market Value: Fair Market Value (FMV) is the monetary value of an asset that can be expected in a transaction with a single seller and single buyer, neither of whom are under any compulsion or time restriction to complete the transaction. Fair Market Values for heavy equipment are most closely associated with the private, resale market, as opposed to the public, auction market.

FHWA Hourly Ownership Rate: The ownership costs of depreciation, indirect costs, cost of facilities capital, and major overhaul are annualized and then adjusted to reflect the average annual working season to obtain a monthly rate, from which weekly, daily and hourly rates are derived. The FHWA Hourly Ownership Rate in particular is determined by taking the monthly ownership rate/176.

FHWA Rate: The FHWA (Federal Highway Administration) has approved the use of Rental Rate Blue Book on federally funded projects. The most common application is in force account work and for federally funded projects. FHWA (Federal Highway Administration) has limited its participation in matching funds with state highway agencies (using Rental Rate Blue Book) to the monthly rate divided by 176 (hours/month) plus the hourly operating cost. Additionally, FHWA states that the rates must also be adjusted for age and geographic region. Therefore, the “FHWA” rate in the Blue Book represents the **monthly ownership rate/176 x Age Adjustments x Regional Adjustments plus hourly operating cost**. User-defined adjustments are also included in the FHWA rate shown.

Field Repair: Equipment field repair is a segment of operating cost defined as routine, daily servicing of the equipment and would include repairing, replacing or adjusting small components such as pumps, carburetors, injectors, batteries, filters, belts, gaskets, and hoses.

Field Repair-Labor: Field repair labor costs are accrued on a machine working-hour basis to offset charges incurred to perform normal field repair and maintenance.

Field Repair-Parts: Field repair parts costs are accrued on a machine working-hour basis to offset the costs for supplying parts necessary to keep the equipment operating in good condition.

FOB (Free on Board): F.O.B. (Free on Board) refers to the practice by which the supplier pays shipping costs from the place of manufacture to a specified destination where the legal title then transfers to the purchaser.

Forced Liquidation Value: Forced Liquidation Value (FLV) is the monetary value of an asset that can be expected in a transaction with a single seller and multiple potential buyers, where the seller is under a short time constraint and has location constraints within which to sell the asset. The Forced Liquidation Value for heavy equipment is most closely associated with the public, auction market, as opposed to the private, resale market.

Freight Charges: The freight rates in the schedule are typically Free on Board from the lessor’s warehouse or shipping point.

Glossary

Freight Cost: Freight refers to the transportation cost from factory to Owner's yard in total dollars.

Fuel/Electricity Cost: Average cost of fuel in $/gallon or electricity in $/kWh.

Ground Engaging Components Cost: Ground Engaging Components Cost include repair and/or replacement, either in whole or part, of ground engaging components such as pads, drums, teeth, and cutting edges.

Hourly Estimated Operating Cost: Hourly Estimated Costs include the cost of labor and parts needed for routine, daily servicing of the equipment.

Idling Rates: Idling rates refer to any instance in which a piece of equipment is located on a job site and the engine is burning fuel, but no ground engaging or other components are actively engaged in meaningful work. Idling Rates in the EquipmentWatch Cost Recovery Guide are by default the hourly cost associated with an asset idling.

Indirect Equipment Costs: Indirect equipment costs consist mostly of overhead costs such as normal risk insurance and property taxes along with storage, security, mechanics supervision, inspection, licenses, and record keeping.

List Price: The list price represents the manufacturer's suggested price for a complete working machine F.O.B. factory.

Lube Cost: Lubrication includes the costs of oils, grease, coolants, and filters. Labor and ancillary equipment involved in servicing are also included.

Mechanic's Wage: The Mechanic's Wage is the hourly rate paid for labor including fringe benefits.

Miscellaneous Supply Parts: Miscellaneous Supply parts are those items normally stocked in bulk for an entire fleet, rather than for individual machines.

Market Popularity: Market Popularity is a proprietary metric calculated by EquipmentWatch to determine a model's popularity relative to other models within the same equipment category. Popularity is calculated using transactional data collected within a rolling 12-month period. After finding the unit volume for each model, a percentile-based distribution is created for the entire category. Based on the number of records observed, the model will fall into one of 5 percentiles of the distribution. Each percentile corresponds with one of the popularity levels shown below.

Glossary

Model Year: Model year indicates the annual production period in which a unit was manufactured or shipped from the factory. When assigning model years, manufacturers may utilize calendar years, fiscal years, or other production cycles. As a result, the model year can differ from the calendar year of manufacture. For example, a unit manufactured in late 2015 will typically have a model year of 2016.

Multiple Shifts: No industry standard exists regarding the handling of fixed Ownership costs in computation of overtime rates.

Operating Rate: The Operating Rate is the cost to operate an asset per hour.

Orderly Liquidation Value: Orderly Liquidation Value (OLV) is the monetary value of an asset that can be expected in a transaction with a single seller given a reasonable amount of time to find one or more purchasers of a liquidation sale, where the seller is under a short time constraint and has location constraints within which to sell the asset.

Overhaul: Overhaul reflects costs necessary to keep a machine functional throughout its economic life: the periodic rebuilding of engines, transmissions, undercarriages, hydraulic pumps, cylinders, and other major components.

Overhaul-Labor: Overhaul labor is accrued for each machine working hour to offset charges incurred to replace, rebuild and recondition major components and are to be included whether repair is performed in the contractor's maintenance facility or at an outside shop.

Overhaul – Parts: Overhaul parts costs are accrued for each machine working hour to offset costs incurred for periodic replacing, rebuilding and reconditioning of major components, such as engines, transmission, undercarriages, etc.

Primary Engine Power Consumption: Primary Engine Power Consumption is calculated using average load factors, equipment horsepower, and the price of fuel per gallon. Actual fuel consumption will depend on variations in load factors, elevation, engine performance, operator efficiency, and terrain.

Rental Decision Point™: A proprietary EquipmentWatch metric that answers the key equipment manager question: for any given project, should I used an owned asset or a rented asset?

Rental Period: On local rentals the equipment rental period most often starts when equipment leaves the lessor's warehouse and stops when it is returned to the warehouse.

Resale Value: Resale value is the current fair market value of a piece of equipment expressed in total dollars.

Glossary

Residual Value: Residual Value represents the worth of a piece of equipment at the end of a given term (e.g. multi-year lease or useful life). A high residual value generally shows that a machine has been successful at the work demanded of it, has presented minimal maintenance issues over its service life, and still presents a high value to buyers on the resale market. Each of these machines represents quality and gives buyers confidence in their investment on both the new equipment and equipment resale/auction markets.

EquipmentWatch residual values are an estimate of the retained value of an asset, given a purchase price, FMV, or FLV, based on value adjustments and expected annual usage. These values are based on historical depreciation rates and are set according to today's dollars. They do not include any inflation factors or additional forecasting measures.

Rule-based Serial Numbers: In contrast to serial number ranges, rule-based serial numbers are similar to Vehicle Identification Numbers (VINS) in the on-highway industry. These serial numbers often contain elements that identify the manufacturer, series, model, model year, manufacturing location, configurations, or other details. Rules and logic that determine the location of the elements within the serial number are set by each manufacturer. Serial numbers can only decoded and verified with extensive knowledge of the manufacturer's system.

Sales Tax: Sales tax refers to a compulsory contribution to state revenue imposed by the government a the point of sale on goods and services.

Secondary Engine Power Consumption: Fuel costs are included for machines that have dual engines or are truck mounted.

Serial Number Ranges: A serial number range is a sequential set of serial numbers that are assigned within a production period. Serial number ranges can be numeric or alphanumeric. Some manufacturers incorporate prefixes to identify a specific model or series while others apply the same sequential range to every machine built. If a manufacturer uses serial number ranges, model year can be verified by determining whether a unit's serial number falls within the lowest and highest values of the range.

Serial Number Verification: The verification process compares a given serial number to known ranges or rules for the appropriate manufacturer and model. The serial number is considered verified if it matches the manufacturer's information. For verified serial numbers, EquipmentWatch provides the correct model year and displays any transactional data.

Standby: Standy refers to the period during which equipment is assigned to a job and available for work, but is not put into operation until needed.

Glossary

Standby Rates: Standby refers to the situation where equipment is on the job and available for work, but is not put into operation until needed.

Tire Cost: Tire costs include the repair and/or replacement of tires.

Tire Life: Tire Life is the expected life in hours of a new set of tires, based on severity of the application.

Year of Manufacture: Year of manufacture refers to the calendar year in which a unit was manufactured. This may differ from the unit's model year.

Why don't you use OLV?

Orderly Liquidation Value, or OLV, is a third major category of values. These are the values of an asset given a single seller and multiple potential buyers given a long or indefinite timeframe in which to dispose. Given the lack of clarity around the time dimension, we have chosen not to make assumptions about the orderly liquidation process. However, OLV is typically between FLV and FMV in gross value.