



SUMMARY

CONSTRUCTION

LIFT/ACCESS

AGRICULTURE

COMMERCIAL TRUCK

MARKET DATA: SEPTEMBER 2017

EquipmentWatch remains the largest sales database on the planet with 20x the sales data of any other source.

\$30,947,271,778

RESALE
\$30,700,664,876

392,501 Assets

AUCTION
\$246,606,902

10,327 Assets

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

How is the Price Stability INDEX calculated?

MARKET SUMMARY

For more detailed articles, visit [EquipmentWatch Intelligence](#) online.

MARKET ACTIVITY	YEAR OVER YEAR MARKET METRICS		MONTH OVER MONTH MARKET METRICS		PRICE STABILITY INDEX™
	VALUES	FLV	VALUES	FLV	
CONSTRUCTION \$17,926,673,353 MARKET VALUE 229,689 ASSETS	VALUES ▼ 4.9% FMV VOLUME ▲ 14.2% RESALE	▼ 6.6% FLV ▲ 28.6% AUCTION	VALUES ▲ 0.4% FMV VOLUME ▼ 28.4% RESALE	▲ 0.7% FLV ▼ 99.4% AUCTION	100.66 95 ——— 105 DEFLATED STABLE INFLATED
LIFT/ACCESS \$1,193,909,237 MARKET VALUE 41,738 ASSETS	VALUES ▼ 10.2% FMV VOLUME ▲ 15.7% RESALE	▼ 10.4% FLV ▲ 72.5% AUCTION	VALUES ▲ 0.5% FMV VOLUME ▼ 26.2% RESALE	0.0% FLV ▲ 59.8% AUCTION	100.81 95 ——— 105 DEFLATED STABLE INFLATED
AGRICULTURE \$10,369,074,383 MARKET VALUE 114,552 ASSETS	VALUES ▼ 5.2% FMV VOLUME ▼ 35.7% RESALE	▼ 5.0% FLV ▲ 0.3% AUCTION	VALUES ▲ 0.5% FMV VOLUME ▼ 19.7% RESALE	▲ 0.8% FLV ▲ 27.0% AUCTION	100.48 95 ——— 105 DEFLATED STABLE INFLATED
COMMERCIAL TRUCK \$2,631,785,451 MARKET VALUE 57,135 ASSETS	VALUES ▼ 2.8% FMV VOLUME ▲ 36.5% RESALE	▼ 0.5% FLV ▲ 15.9% AUCTION	VALUES ▼ 1.0% FMV VOLUME ▲ 42.5% RESALE	▲ 3.7% FLV ▼ 119.6% AUCTION	99.22 95 ——— 105 DEFLATED STABLE INFLATED



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How is the Price Stability INDEX calculated?

CONSTRUCTION

OVERALL

TYPE TRENDS

BRAND TRENDS

REGIONAL TRENDS

MARKET ACTIVITY

\$17,926,673,353
MARKET VALUE

229,689
ASSETS

YEAR OVER YEAR

MARKET METRICS

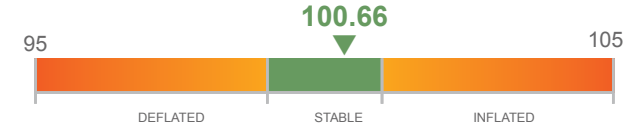
VALUES ▼ **4.9%** FMV ▼ **6.6%** FLV
VOLUME ▲ **14.2%** RESALE ▲ **28.6%** AUCTION

MONTH OVER MONTH

MARKET METRICS

VALUES ▲ **0.4%** FMV ▲ **0.7%** FLV
VOLUME ▲ **28.4%** RESALE ▲ **99.4%** AUCTION

PRICE STABILITY INDEX™



MARKET PERFORMANCE

September values for the auction and resale channels continued their newly founded upward trend. Values increased at stable levels with a Price Stability Index™ of 100.66.

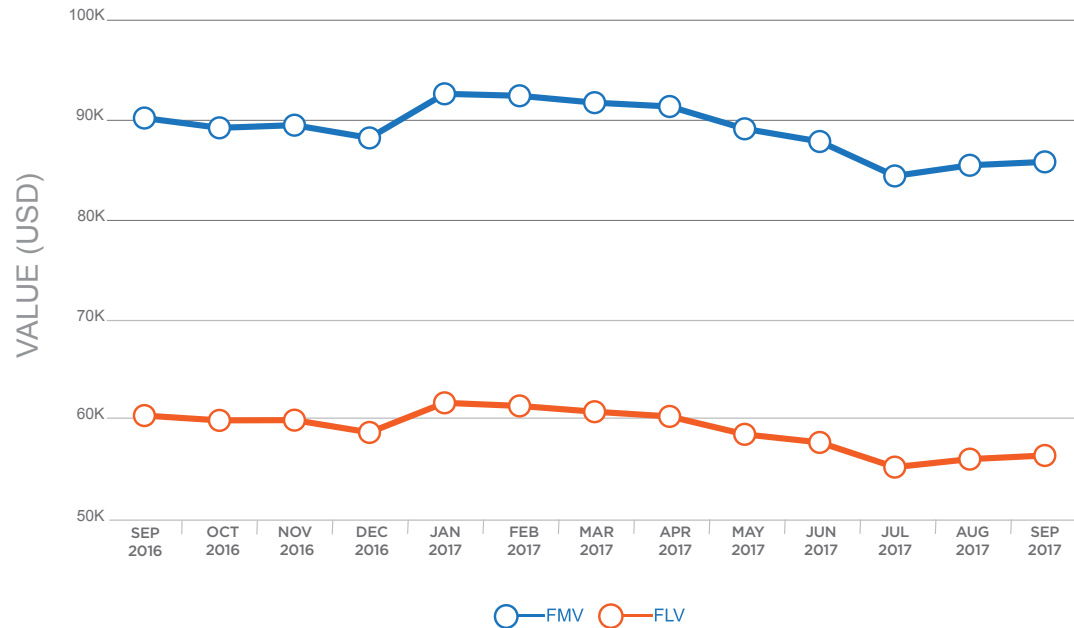
MARKET HIGHLIGHTS

- Market activity increased in the resale channel by 28.4% since August.
- A sign that less heavily-used equipment was purchased in September can be seen in the decreases in utilization since August 2017.
- Average age decreased by 2.5% in the resale channel since August.

MARKET FORECAST

We expect the upward trend in FMV and FLV to continue over the next few months, with a slight expected drop around December or January. It is typical for values to rise each year after the end of the construction season in October as managers seek to replace their fleet before the next construction season starts.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▲ 28.4% RESALE	▲ 99.4% AUCTION	▼ 2.5% RESALE	▲ 2.6% AUCTION	▼ 0.7% RESALE	▲ 13.0% AUCTION
YEAR OVER YEAR	▲ 14.2% RESALE	▲ 28.6% AUCTION	▲ 7.8% RESALE	▲ 4.0% AUCTION	▼ 0.1% RESALE	▼ 6.1% AUCTION



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[How is the Price Stability INDEX calculated?](#)

LIFT/ACCESS

OVERALL TYPE TRENDS BRAND TRENDS REGIONAL TRENDS

MARKET ACTIVITY

\$1,193,909,237
MARKET VALUE

41,738
ASSETS

YEAR OVER YEAR

MARKET METRICS

VALUES ▼ **10.2%** FMV ▼ **10.4%** FLV

VOLUME ▲ **15.7%** RESALE ▲ **72.5%** AUCTION

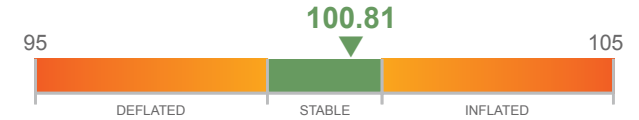
MONTH OVER MONTH

MARKET METRICS

VALUES ▲ **0.5%** FMV **0.0%** FLV

VOLUME ▲ **26.2%** RESALE ▲ **59.8%** AUCTION

PRICE STABILITY INDEX™



MARKET PERFORMANCE

FMV for lift had a slight increase in September when compared to August data, increasing by 0.5%, while FLV remained even. Overall volume increased by significant amounts in September, with both channels having a 26.2% and 59.8% increase, respectively.

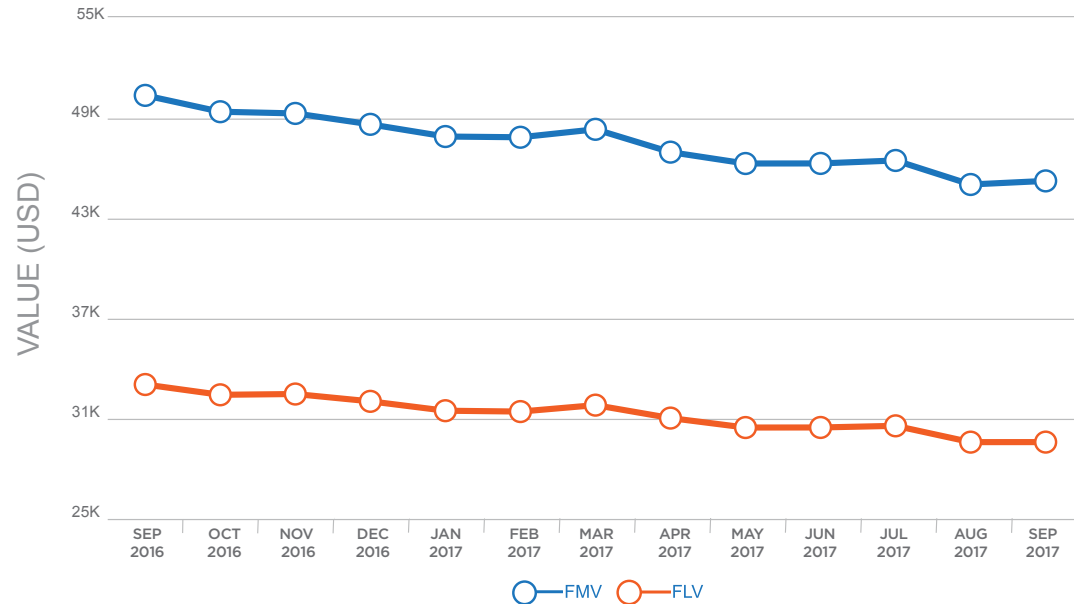
MARKET HIGHLIGHTS

- The Price Stability Index™ was stable again for September, with a score of 100.81. This is the fourth straight month that the lift market has been stable.
- The overall market value and number of assets increased by about 27% and 20%, respectively, when compared to August. These are relatively large increases and are expected due to the start of the fall season.
- Overall average age and utilization increased slightly in September, as compared to August.

MARKET FORECAST

As we look forward to October, we expect to see values start to decrease by a few percentage points. Volume should continue to increase as well.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▲ 26.2% RESALE	▲ 59.9% AUCTION	▲ 0.3% RESALE	▲ 2.3% AUCTION	▲ 6.6% RESALE	▼ 1.6% AUCTION
YEAR OVER YEAR	▲ 15.7% RESALE	▲ 72.5% AUCTION	▲ 5.6% RESALE	▼ 0.9% AUCTION	▲ 5.2% RESALE	▼ 1.0% AUCTION



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OVERALL

TYPE TRENDS

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MARKET ACTIVITY

YEAR OVER YEAR

MARKET METRICS

\$10,369,074,383
MARKET VALUE

114,552
ASSETS

VALUES

▼ **5.2%**
FMV

▼ **5.0%**
FLV

VOLUME

▼ **35.7%**
RESALE

▲ **0.3%**
AUCTION

MONTH OVER MONTH

MARKET METRICS

VALUES

▲ **0.5%**
FMV

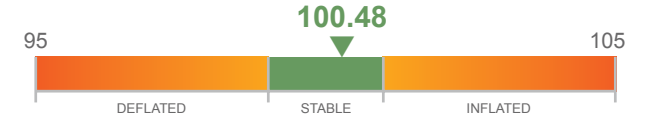
▲ **0.8%**
FLV

VOLUME

▼ **19.7%**
RESALE

▼ **27.0%**
AUCTION

PRICE STABILITY INDEX™



MARKET PERFORMANCE

Values remained stable as previously predicted, but market activity has not had the expected rebound. FMVs increased slightly by 0.5% since August and prices remained stable with a Price Stability Index™ of 100.48. Though September prices appear to be stable from August, FMVs are 5.2% lower compared to September 2016.

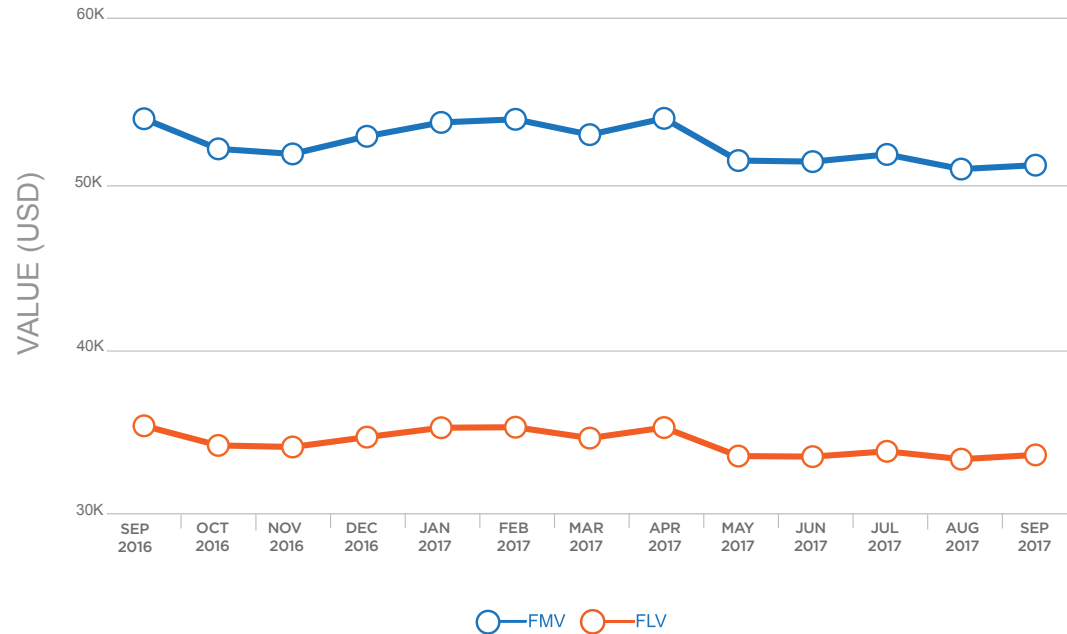
MARKET HIGHLIGHTS

- Auction channel market activity decreased by 27.0% from August, but remained flat from September 2016.
- Values increased since August despite average age increasing slightly in the resale channel and significantly in the auction channel.
- For the resale channel, average age increased by 14.3% since September 2016, which almost exactly matches the 14.2% increase in utilization in the same time period.

MARKET FORECAST

FMVs and FLVs will likely continue to be at stable levels for the remainder of the year.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▼ 19.7% RESALE	▼ 27.0% AUCTION	▲ 1.3% RESALE	▲ 19.2% AUCTION	▼ 1.3% RESALE	▼ 22.2% AUCTION
YEAR OVER YEAR	▼ 35.7% RESALE	▲ 0.3% AUCTION	▲ 14.3% RESALE	▼ 4.8% AUCTION	▲ 14.2% RESALE	▼ 26.2% AUCTION



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OVERALL

TYPE TRENDS

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REGIONAL TRENDS

How is the Price Stability INDEX calculated?

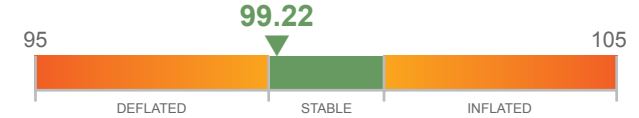
MARKET ACTIVITY	YEAR OVER YEAR		MONTH OVER MONTH		
	MARKET METRICS		MARKET METRICS		PRICE STABILITY INDEX™

\$2,631,785,451
MARKET VALUE

57,135
ASSETS

VALUES ▼ **2.8%** FMV ▼ **0.5%** FLV
VOLUME ▲ **36.5%** RESALE ▲ **15.9%** AUCTION

VALUES ▼ **1.0%** FMV ▲ **3.7%** FLV
VOLUME ▲ **42.5%** RESALE ▲ **119.7%** AUCTION



MARKET PERFORMANCE

Decreases on FMV slowed down during September as there was a clear shift in the market share with younger models entering the used market. The FLV had the first overall increase since the start of the year strongly due to the medium duty trucks.

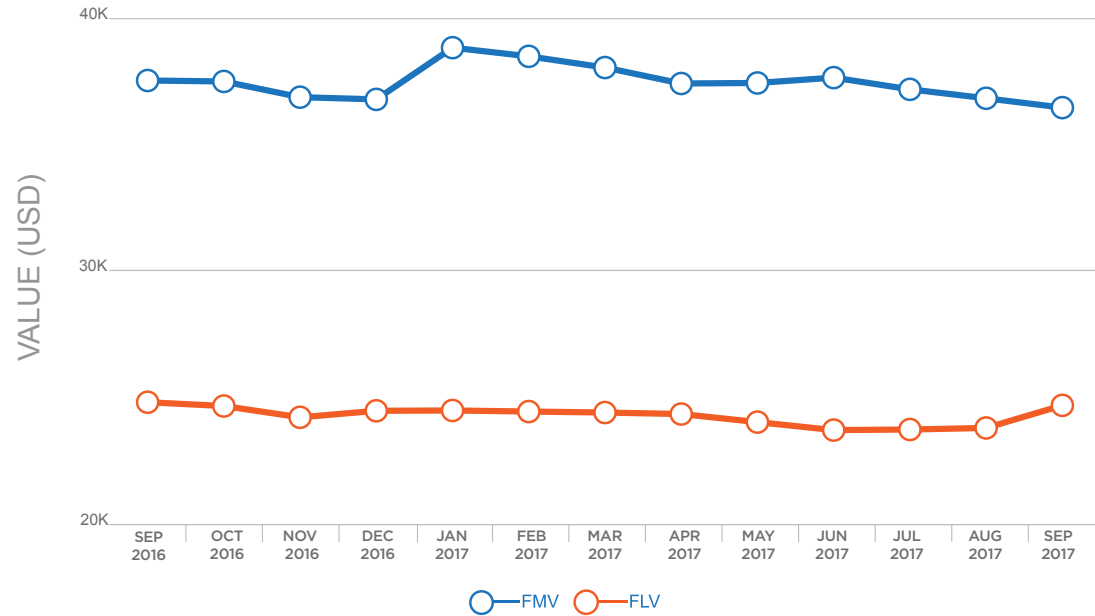
MARKET HIGHLIGHTS

- Average age increased across the resale and auction channels with the exception of a 2.2% drop month over month on resale only.
- Due to the increasing FLV this month, the year over year drop was only 0.5% despite increases in average age and usage.
- Volume was up across the entire market showing the largest increases on the resale channel as we move into the fourth quarter of the year and new model year trucks are releasing.

MARKET FORECAST

As we get into the fourth quarter, expect FMV to continue slowing down to end out the year.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▲ 42.5% RESALE	▲ 119.6% AUCTION	▼ 2.2% RESALE	▲ 9.3% AUCTION	▼ 0.5% RESALE	▼ 1.9% AUCTION
YEAR OVER YEAR	▲ 36.5% RESALE	▲ 15.9% AUCTION	▲ 8.5% RESALE	▲ 10.2% AUCTION	▲ 2.8% RESALE	▲ 37.9% AUCTION



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 four distinct equipment markets: Construction, Lift/Access, Agriculture, and Commercial Trucks. For each market, we selected the top equipment types based on their market share from January 2015 to December 2015. They're listed in the table to the right.

Construction	Lift/Access	Agriculture	Commercial Trucks
4-Wd Articulated Wheel Loaders	Electric Self Propelled Scissor Lifts	Track Tractors	Heavy Duty: Conventional - Sleeper (Heavy Tractor)
Articulated Frame Graders	I.C. Pneumatic Tire Lift Trucks	Balers	Heavy Duty: Conventional - Day Cab (Heavy Tractor)
Articulated Rear Dumps	I.C. Self Propelled Telescopic Boom Aerial Lifts	Combines	Heavy Duty: Conventional - Day Cab (Heavy Cab Chassis)
Compact Track Loaders	I.C. Self-Propelled Articulating Boom Aerial Lifts	Corn Headers	Medium Duty: Conventional - Day Cab (Cab Chassis)
Crawler Mounted Compact Excavators	Telescoping Boom Rough Terrain Lift Trucks	Wheel Tractors	Medium Duty: Cabover - Day Cab (Cab Chassis)
Crawler Mounted Hydraulic Excavators	I.C. Cushion Tire Lift Trucks	Planters	Medium Duty: Crew (Cab Chassis)
Large Generator Sets			
Single Drum Vibratory Compactors			
Skid Steer Loaders			
Standard Crawler Dozers			
Tandem Vibratory Compactors			
Tractor-Loader-Backhoes			



APPENDIX

We have also limited the scope of the EquipmentWatch Market Report to the following brands in each market:

Construction	Lift/Access	Agriculture	Commercial Truck
Bobcat	Caterpillar	Deere	International
Case	Genie	Case IH	Freightliner
Caterpillar	JLG	New Holland	Volvo
Deere	Sky Trak	Massey Ferguson	Kenworth
Komatsu	Skyjack	Challenger	Peterbilt
Volvo	Hyster	Kubota	Hino

THE EQUIPMENTWATCH PRICE STABILITY INDEX™

Academic justification

The EquipmentWatch Price Stability Index™ is a new metric for understanding used equipment markets for used heavy equipment. It measures resale price capacity based on the movement of market prices and market activity among the equipment types and manufacturers presented above.

Methodology and Calculation

The EquipmentWatch Price Stability Index™ is based on the Laspeyres Index, one of the many economic indices used to monitor changes in prices over time. To calculate it, we use the framework provided by the Laspeyres Index:

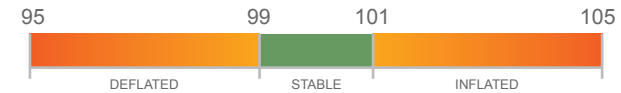
$$P_L = \frac{\sum(p_{c,t_n}) * (q_{c,t_0})}{\sum(p_{c,t_0}) * (q_{c,t_0})}$$

This equation sums the product of prices in the current month and quantity of the previous month and divides that by the product of prices in the previous month and quantity in the previous month.

We have modified this method to track the change in prices for each equipment type from month-to-month against the change in market activity for each equipment type month to month.

Interpretation

The EquipmentWatch Price Stability Index™ can be thought of as an index of price capacity. In more formal terms, it measures how efficiently used markets adjust to equilibrium given previous adjustments in prices and market activity. There are three primary ranges in the EquipmentWatch Price Stability Index™, as noted below:



When the EquipmentWatch Price Stability Index™ is higher than 101, that indicates that equipment is valued at a higher level than expected, given last month's prices and amount of market activity. We categorize this range as "Inflated".

When the EquipmentWatch Price Stability Index™ is lower than 99, it indicates that equipment is valued at a lower level than expected, given last month's prices and market activity. We categorize this range as "Deflated".

When the EquipmentWatch Price Stability Index™ is between 99 and 101, it is typically demonstrating that equipment prices and market activity are moving appropriately towards market equilibrium. We categorize this range as "Stable".

It is important to note that a higher rating on EquipmentWatch Price Stability Index™ does not necessarily imply that used markets are better than a lower rating. For some, price inflation is desirable; for others, it is undesirable. However, all parties involved in buying or selling equipment on used markets can use the EquipmentWatch Price Stability Index™ to easily understand how prices in a particular region or equipment channel are moving relative to the previous month.



APPENDIX

SECTION GUIDES

The Introduction

In the top left, we exhibit a tally of the estimated market value of market activity last month in the Resale channel and Auction channel.

In the main table, we display market activity and assets for each market, along with month over month and year over year changes in Fair Market Value and Forced Liquidation Value.

Overall Trends

This page is an overview of each channel. The graph highlights an overall FMV and FLV trend line for all of the equipment types and manufacturers in the report for the last 13 months. It also displays very general month over month and year over year trends across the entire channel.

Type Trends

This page subsets the analysis of the previous page across each of the key equipment types in this report.

Brand Trends

This page shows some of the key month over month trends for the manufacturers represented in this report, including equipment values, Usage, market activity, and age trends.

Regional Trends

This page shows the EquipmentWatch Price Stability Index™ for each of the 14 regions, using the same calculation method as the EquipmentWatch Price Stability Index™ shown on the first page of the report. The states and provinces which make up each region are listed in the table to the right.

Note that due to regional disparity in market activity, some regions with very little or no market activity in the last month are excluded from the analysis. These are marked with “NA” on the map.

Country	Region	State/Province
USA	A	CT, DE, MA, ME, NH, NJ, NY, RI, VT
USA	B	MD, P, VA, WV
USA	C	AL, FL, GA, KY, MS, NC, SC, TN
USA	D	IL, IN, MI, OH, WI
USA	E	IA, KS, MO, NE
USA	F	AR, LA, OK, TX
USA	G	AZ, CO, NM, UT
USA	H	ID, MN, MT, ND, SD, WY
USA	I	CA, NV, OR, WA
USA	J	HI
USA	K	AK
CAN	L	NT, NU, YT
CAN	M	AB, BC, MB, SK
CAN	N	NB, NL, NS, ON, PE, QC

FAQS

Why did you limit the equipment types in this report?

EquipmentWatch tracks market activity for over a hundred unique equipment types each month. For each channel, we selected the most popular equipment types, based on the frequency of appearance on the resale and auction channels.

Why are there only 24 manufacturers in this report?

EquipmentWatch tracks market activity for almost 400 unique manufacturers each month. For each market, we selected the top 6 manufacturers. As the markets shift and prominence on used markets changes, we will adjust our selections accordingly.



APPENDIX

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.

IMPORTANT DEFINITIONS

Fair Market Value (FMV): the value of an asset sold to a single buyer under no compulsion.

Forced Liquidation Value (FLV): the value of an asset sold at a properly advertised and conducted auction in which the seller is under compulsion to sell on an as-is, where-is basis as of a specific date.

Market Activity: A measure of the total number of observations collected by EquipmentWatch, including publicly-available dealer listings, auction results, and final sales data.

Meter Reads: A measure of Usage that varies by equipment market. For most equipment types, this represents engine hours at the time of observation.

Age: the age of an asset, based on model year and the year of observation.

ABOUT EQUIPMENTWATCH

EquipmentWatch is the trusted source for heavy equipment data and intelligence. EquipmentWatch produces the leading database information products for the construction equipment industry and is the world leader in heavy construction research and serves more than 15,000 professional, high-volume users of construction and lift-truck data. Our online and print products are valuable tools in decisions surrounding the purchase, valuation, operation, and disposal of equipment.

For nearly 50 years, EquipmentWatch has served contractors, equipment manufacturers, dealers, rental companies, lenders and insurers, and government agencies involved in heavy civil construction.

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