



Market Trends Report

Used Earthmoving & Aerial Equipment

(North America)

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About this Research

This research includes summary information taken from Ritchie Bros. Market Trends, a premium data product that allows users like you to access 10 years of Ritchie Bros. transaction level data providing:

- ▶ **Real time insights** - See results from our most recent auctions
- ▶ **Equipment flows** - Draw insights into asset flows across state and national boundaries
- ▶ **Make-model details** - Determine residual pricing of assets at make-model level of detail for auction
- ▶ **Like-for-like comparisons** - Compare residual value for like-for-like assets

Subscribe to Ritchie Bros. Market Trends and access this data and more in-depth detail by country, date range, asset category, brand, model, as well as median asset age, usage and other key data points.

All data and charts are from Ritchie Bros. Market Trends.
To learn more about Market Trends, visit rbassetsolutions.com

Summary

Thank you for subscribing to the Ritchie Bros. monthly Market Trends Report! With our January 2022 issue we take a detailed look back at construction and aerial equipment sales throughout 2021.

Supply chain issues, tight supply, and unprecedented demand all played major factors in used equipment sales last year. In the United States volumes were down in **large and medium earthmoving** categories, as well as **aerial equipment**, while prices rose significantly. For example, the median dozer price in the U.S. in 2021 was up 22% from 2020, while units sold had decreased by 8% year over year. We also saw big median price increases in the U.S. for boom lifts (up 20% YOY), mini excavators (up 17%), and loader backhoes (up 16%).

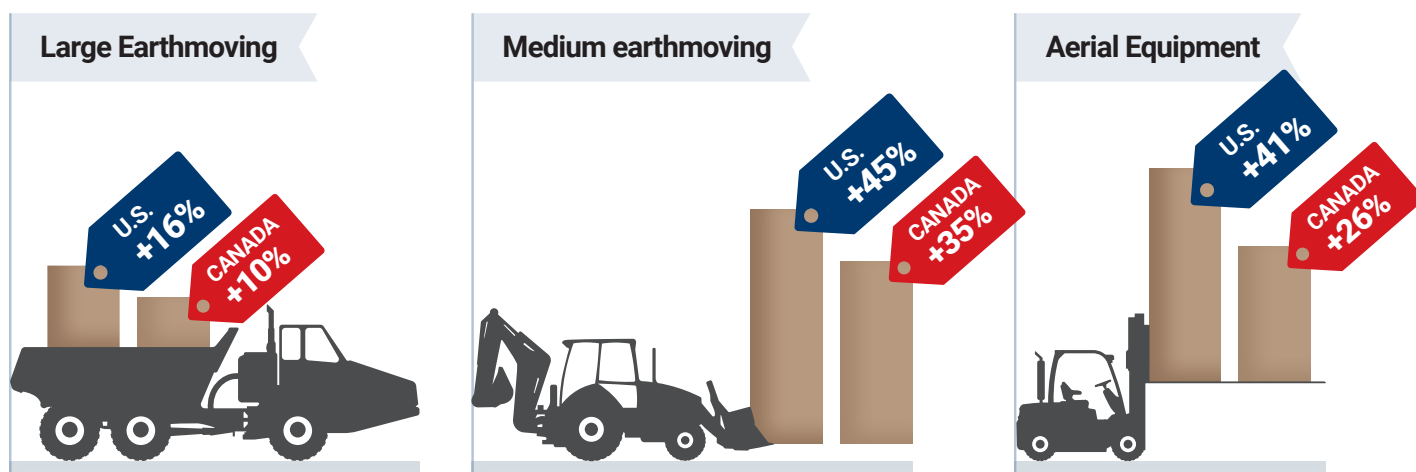
In Canada, we saw the same supply shortage and price increase across most equipment categories, except for skid steer loader and loader backhoe units, which both had slightly higher volumes year

over year. Interestingly, even with 6% more backhoes sold in Canada in 2021, the median price rose 18.8% compared to 2020. We also saw big median price increases in Canada for forklifts (up 23% YOY), motor graders (up 17%), and multi-terrain loaders (up 16%).

Indexes show accelerating rise in pricing

After our main feature outlining data for major earthmoving and aerial equipment categories, we turn to our individual industry indexes. In the United States our truck tractor index continues to lead the way, up 65% year over year, while medium earthmoving and vocational trucks are up 45% and 44% respectively. We are also seeing strong pricing in Canada right now, with truck tractor prices up approximately 37%, while medium earthmoving and vocational trucks are up 35% and 32% respectively.

Large, medium and aerial price growth (RB price indexes)



But what about the retail market?

We have included retail commentary and charts from Rouse Services on pages 31 - 33 of this report. Rouse saw strong pricing across most used equipment categories in 2021, with auction prices accelerating at a greater rate than retail.

For more trends and timely insights, we encourage you to sign up for the full Ritchie Bros. Market Trends module where you can dive deep into almost any equipment type or model you want. Contact dataproduts@ritchiebros.com for more info.



Doug Olive, SVP, Pricing

On the Ritchie Bros. auction market...

"We attracted a record number of bidders in 2021, resulting in the strongest equipment pricing we have ever seen. Truck tractor pricing over the past three months is up 65% year over year, while medium earthmoving, vocational trucks, and aerial equipment prices are up 45%, 44%, and 41% respectively. It's a seller's market and consignors around the world are taking advantage by turning their surplus assets into cash."



Doug Rusch,
Managing Director,
Rouse Sales

On the retail used equipment market...

"In 2021 retail pricing for earthmoving and aerial equipment reached its highest level in years. Strong pricing coincided with healthy sales volumes, with retail volume down just slightly vs. the prior year. Auction prices also reached record high levels, increasing more rapidly than the retail market as is often typical in high-demand environments."

Ritchie Bros. Mixed Adjusted Price Indexes Used Commercial Assets - Pricing Highlights

Price change (±1.5%) year-over-year for the 3 months ending December 31, 2021

Categories	USA			Canada		
Large Earthmoving	▲	Increased ~	16%	▲	Increased ~	10%
Medium Earthmoving	▲	Increased ~	45%	▲	Increased ~	35%
Aerial	▲	Increased ~	41%	▲	Increased ~	26%
Truck Tractors	▲	Increased ~	65%	▲	Increased ~	37%
Vocational Trucks	▲	Increased ~	44%	▲	Increased ~	32%

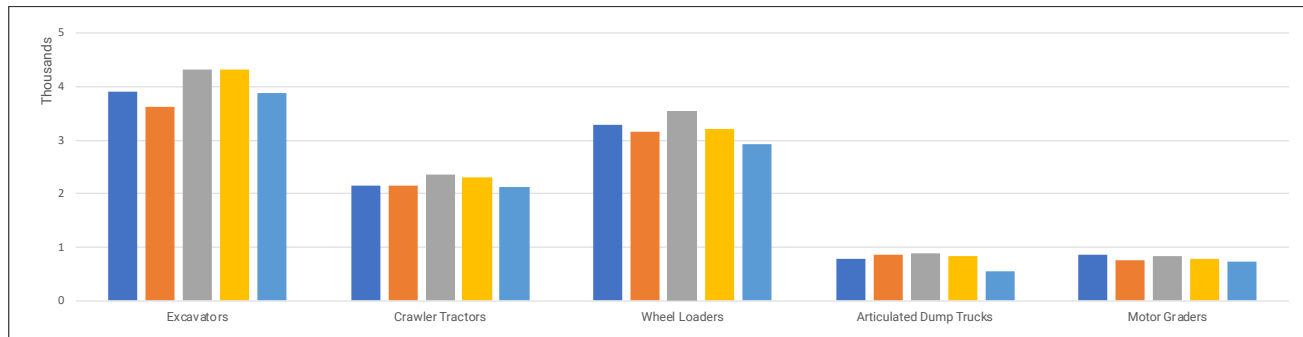
Source: Ritchie Bros. transactional data

U.S.: large earthmoving, medium earthmoving and aerial equipment

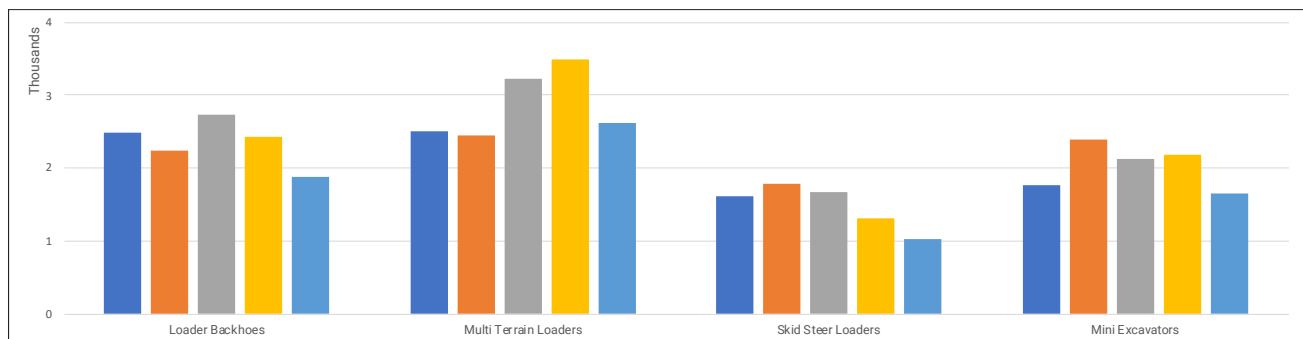
Unit sales for many large and medium earthmoving asset categories, as well as aerial equipment, were down in 2021 vs 2020 in the U.S. Additionally, median age and usage were higher in 2021.

Aerial equipment unit sales—including telehandlers, boom lifts, scissor lifts, and forklifts—peaked in 2020.

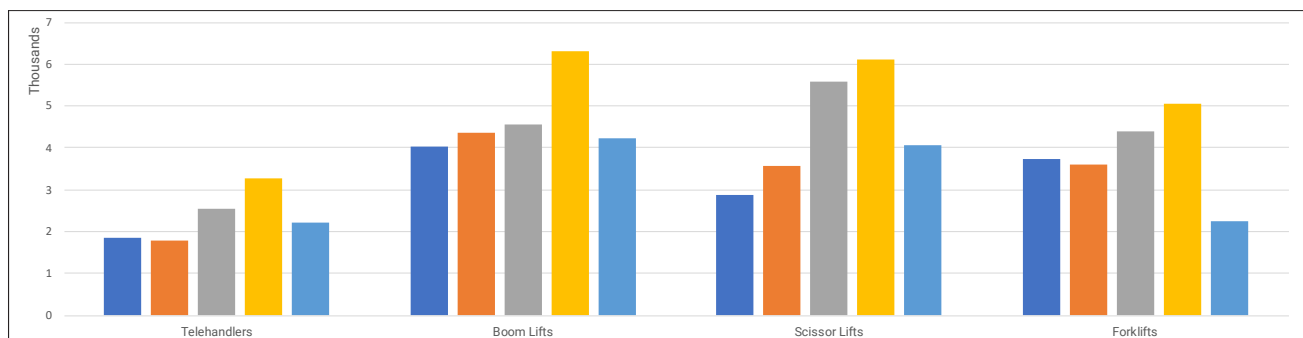
Large Earthmoving: Units Sold in the U.S. (thousands)



Medium Earthmoving: Units Sold in the U.S. (thousands)



Aerial Equipment: Units Sold in the U.S. (thousands)

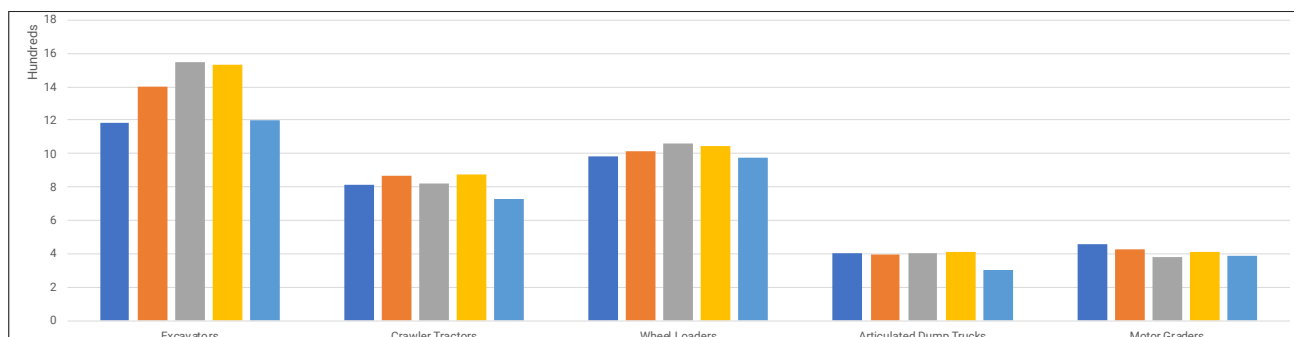


■ 2017 ■ 2018 ■ 2019 ■ 2020 ■ 2021

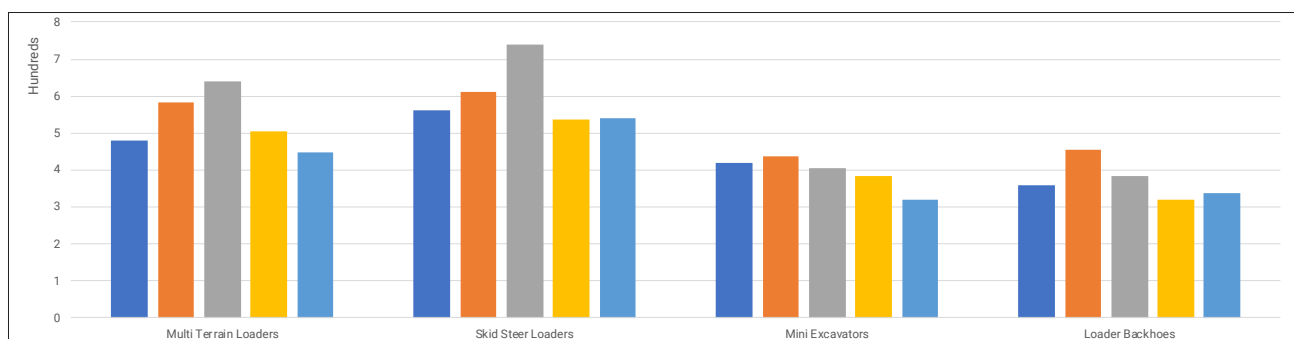
Canada: large earthmoving, medium earthmoving and aerial equipment

Compared to the United States, fewer units were sold in Canada in 2021. However, the decline in aerial units sold from 2020 to 2021 was not as drastic as witnessed in the U.S.

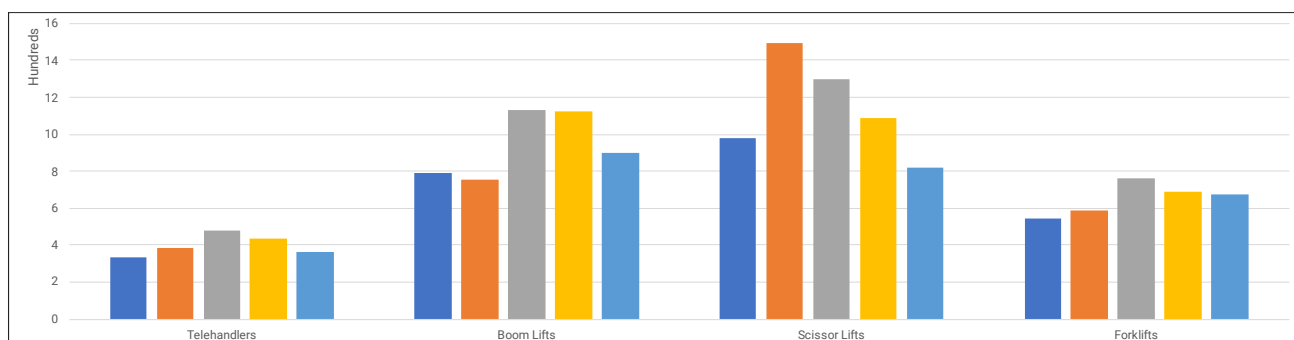
Large Earthmoving: Units Sold in Canada (hundreds)



Medium Earthmoving: Units Sold in Canada (hundreds)



Aerial Equipment: Units Sold in Canada (hundreds)



■ 2017 ■ 2018 ■ 2019 ■ 2020 ■ 2021

Excavators



Median pricing for excavators increased, while machines were older and had more hours in 2021. The mix of buying activity shifted slightly as more international buyers bought excavators in 2021 compared to the local market (within state).

	2021	2020	Change
Median Price (USD)			
	\$57.5 K	\$50.0 K	15.0%
Volume (Units)			
	3,885+	4,315+	-10.0%
Median Age (Years)			
	8	7	1 yr older
Median Usage (Hours)			
	6.1 K	5.5 K	-12.4%
Top Selling Brands by Volume			
	Caterpillar	Caterpillar	No change
	John Deere	John Deere	No change
	Komatsu	Komatsu	No change
Top Makes & Models by Volume			
	Caterpillar 336FL	Caterpillar 336FL	No change
	Caterpillar 336EL	Caterpillar 336EL	No change
	Caterpillar 349FL	Caterpillar 329EL	Changed
Buyer Locations			
Local (within state)	21%	24%	Down
Out-of-state	57%	60%	Down
International	22%	16%	Up

Numbers are approximate

Excavators



Excavators sold in Canada were significantly older (four years) in 2021 compared to prior year. The top brand sold by volume went from John Deere in 2020 to Caterpillar in 2021.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$62.5 K	\$49.9 K	\$67.5 K	\$50.2 K	-7.4%
Volume (Units)	1,195+		1,530+		-21.9%
Median Age (Years)	12		8		4 yrs older
Median Usage (Hours)	9.7 K		8.1 K		-20.2%
Top Selling Brands by Volume	Caterpillar John Deere Hitachi		John Deere Caterpillar Hitachi		Changed Changed No change
Top Makes & Models by Volume	John Deere 350D Caterpillar 336EL John Deere 290G		John Deere 290G John Deere 350G Hitachi ZX290LC5N		Changed Changed Changed
Buyer Locations					
Local (same province)	53%		50%		Up
Out-of-province	34%		38%		Down
International	13%		12%		Up

Numbers are approximate

Dozers



Median pricing increased 22% in 2021 for dozers. The mix of buying activity shifted in 2021, with increased international buyer activity vs. 2020.

	2021	2020	Change
Median Price (USD)			
	\$60.0 K	\$49.0 K	22.4%
Volume (Units)			
	2,115+	2,295+	-7.8%
Median Age (Years)			
	10	8	2 yrs older
Median Usage (Hours)			
	5.9 K	5.3 K	-13.0%
Top Selling Brands by Volume			
	Caterpillar	Caterpillar	No change
	John Deere	John Deere	No change
	Komatsu	Komatsu	No change
Top Makes & Models by Volume			
	Caterpillar D6T	Caterpillar D6T	No change
	Caterpillar D6N	Caterpillar D6N	No change
	Caterpillar D8T	Caterpillar D8T	No change
Buyer Locations			
Local (within state)	19%	23%	Down
Out-of-state	62%	63%	Down
International	19%	14%	Up

Numbers are approximate

Dozers



The median age of dozers sold in Canada increased from 13 to 16 years in 2021 vs. 2020. Buying activity shifted towards international purchasers in 2021.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$60.0 K	\$48.7 K	\$68.5 K	\$49.8 K	-12.4%
Volume (Units)	725+		870+		-16.7%
Median Age (Years)	16		13		3 yrs older
Median Usage (Hours)	9.4 K		8.2 K		-14.4%
Top Selling Brands by Volume	Caterpillar John Deere Komatsu		Caterpillar John Deere Komatsu		No change No change No change
Top Makes & Models by Volume	Caterpillar D6T Caterpillar D6N Caterpillar D6R		Caterpillar D6T Caterpillar D6N Caterpillar D7R		No change No change Changed
Buyer Locations					
Local (same province)	48%		50%		Down
Out-of-province	35%		38%		Down
International	17%		12%		Up

Numbers are approximate

Wheel Loaders



Despite wheel loaders being three years older in 2021, the median price increased by nearly 10%. Like excavators and dozers, international buyers purchased a greater percentage of loaders in 2021 over prior year.

	2021	2020	Change
Median Price (USD)			
	\$39.0 K	\$35.5 K	9.9%
Volume (Units)			
	2,930+	3,205+	-8.6%
Median Age (Years)			
	11	8	3 yrs older
Median Usage (Hours)			
	8.9 K	8.1 K	-8.7%
Top Selling Brands by Volume			
	Caterpillar	Caterpillar	No change
	John Deere	John Deere	No change
	Komatsu	Komatsu	No change
Top Makes & Models by Volume			
	Caterpillar 980G	Caterpillar 980G	No change
	Caterpillar 950G	Caterpillar 950G	No change
	John Deere 544K	Caterpillar 950M	No change
Buyer Locations			
Local (within state)	21%	25%	Down
Out-of-state	59%	61%	Down
International	20%	14%	Up

Numbers are approximate

Wheel Loaders



While the median age of loaders sold increased by two years in 2021 vs. 2020 (from 13 to 15 years), pricing was still up year over year.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$40.5 K	\$32.7 K	\$39.0 K	\$28.7 K	3.8%
Volume (Units)					
	970+		1,040+		-6.7%
Median Age (Years)					
	15		13		2 yrs older
Median Usage (Hours)					
	9.4 K		9.4 K		-1.0%
Top Selling Brands by Volume					
	Caterpillar		Caterpillar		No change
	John Deere		John Deere		No change
	Komatsu		Komatsu		No change
Top Makes & Models by Volume					
	Caterpillar 980G		John Deere 624K		Changed
	John Deere 624K		John Deere 644K		Changed
	Caterpillar 980H		John Deere 544J		Changed
Buyer Locations					
Local (same province)	55%		54%		Up
Out-of-province	33%		35%		Down
International	12%		11%		Up

Numbers are approximate

Articulated Dump Trucks



Last year saw a significant decrease in the volume of articulated dump trucks sold in the U.S., down by 33% compared to 2020. Buying activity shifted from local to out-of-state market from 2020 to 2021.

	2021	2020	Change
Median Price (USD)			
	\$70.0 K	\$65.0 K	7.7%
Volume (Units)			
	545+	820+	-33.5%
Median Age (Years)			
	10	8	2 yrs older
Median Usage (Hours)			
	8.1 K	8.0 K	-1.9%
Top Selling Brands by Volume			
	Caterpillar	Caterpillar	No change
	Volvo	Volvo	No change
	John Deere	Terex	Changed
Top Makes & Models by Volume			
	Caterpillar 740	Volvo A40G	Changed
	Caterpillar 740B	Caterpillar 740B	No change
	Caterpillar 745C	Caterpillar 740	Changed
Buyer Locations			
Local (within state)	19%	25%	Down
Out-of-state	68%	61%	Up
International	13%	14%	Down

Numbers are approximate

Articulated Dump Trucks



2021 saw a decrease in the number of articulated dump trucks sold in Canada. Buying activity shifted more domestic this year, with Canadians purchasing a greater percentage of the trucks.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$77.0 K	\$61.3 K	\$74.5 K	\$55.8 K	3.4%
Volume (Units)	295+		405+		-27.2%
Median Age (Years)	14		12		2 yrs older
Median Usage (Hours)	11.8 K		10.7 K		-10.2%
Top Selling Brands by Volume	Volvo Caterpillar John Deere		Volvo Caterpillar John Deere		No change No change No change
Top Makes & Models by Volume	Volvo A30D Caterpillar 740 Komatsu HM4003		Caterpillar 740B Caterpillar 730 Caterpillar 740		Changed Changed Changed
Buyer Locations					
Local (same province)	51%		48%		Up
Out-of-province	41%		37%		Up
International	8%		15%		Down

Numbers are approximate

Motor Graders



Unlike other large earthmoving categories sold in the U.S., the median age of motor graders sold in the U.S. rose significantly, by four years.

	2021	2020	Change
Median Price (USD)			
	\$60.0 K	\$52.5 K	14.3%
Volume (Units)			
	730+	780+	-6.4%
Median Age (Years)			
	15	11	4 yrs older
Median Usage (Hours)			
	6.4 K	6.3 K	-1.9%
Top Selling Brands by Volume			
	Caterpillar	Caterpillar	No change
	John Deere	John Deere	No change
	Volvo	Volvo	No change
Top Makes & Models by Volume			
	Caterpillar 140H	Caterpillar 140H	No change
	Caterpillar 140G	Caterpillar 140G	No change
	Caterpillar 140M3	Caterpillar 140M	Changed
Buyer Locations			
Local (within state)	19%	24%	Down
Out-of-state	50%	49%	Up
International	31%	27%	Up

Numbers are approximate

Motor Graders



The median price of graders jumped by more than 17% in 2021 while the volume sold declined by only 5%.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$61.0 K	\$50.0 K	\$52.0 K	\$37.7 K	17.3%
Volume (Units)	385+		405+		-4.9%
Median Age (Years)	15		14		1 yr older
Median Usage (Hours)	9.8 K		9.9 K		1.2%
Top Selling Brands by Volume	Caterpillar John Deere Champion		Caterpillar John Deere Champion		No change No change No change
Top Makes & Models by Volume	Champion 740A Caterpillar 160H Caterpillar 14H		Caterpillar 14H Champion 740A Champion 740		Changed Changed Changed
Buyer Locations					
Local (same province)	43%		49%		Down
Out-of-province	31%		25%		Up
International	26%		26%		No change

Numbers are approximate

Loader Backhoes



The volume sold in 2021 is down by over 23% while the median price increased by +16% year over year.

	2021	2020	Change
Median Price (USD)			
	\$29.0 K	\$25.0 K	16.0%
Volume (Units)			
	1,870+	2,435+	-23.2%
Median Age (Years)			
	9	8	1 yr older
Median Usage (Hours)			
	3.5 K	3.1 K	-11.1%
Top Selling Brands by Volume			
	John Deere Caterpillar Case	John Deere Caterpillar Case	No change No change No change
Top Makes & Models by Volume			
	John Deere 310J John Deere 310KEP Caterpillar 420D	John Deere 310KEP Case 580N John Deere 310J	Changed Changed Changed
Buyer Locations			
Local (within state)	25%	30%	Down
Out-of-state	45%	43%	Up
International	30%	27%	Up

Numbers are approximate

Loader Backhoes



Unlike most categories covered in this edition, the volume of loader backhoes sold in 2021 improved over 2020 levels. International buying activity also increased last year.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$38.0 K	\$30.3 K	\$32.0 K	\$23.8 K	18.8%
Volume (Units)	335+		315+		6.3%
Median Age (Years)	13		11		2 yrs older
Median Usage (Hours)	5.8 K		5.2 K		-12.6%
Top Selling Brands by Volume	John Deere Case Caterpillar		John Deere Case Caterpillar		No change No change No change
Top Makes & Models by Volume	Case 580SM John Deere 410J John Deere 310SG		Case 580SM Case 580N Case 580SN		No change Changed Changed
Buyer Locations					
Local (same province)	62%		66%		Down
Out-of-province	18%		20%		Down
International	20%		14%		Up

Numbers are approximate

Multi Terrain Loaders



2021 saw a significant decrease in the number of multi terrain loaders sold. Unlike other earthmoving categories sold in 2021, multi terrain loaders were of the same age and had fewer hours.

	2021	2020	Change
Median Price (USD)			
	\$25.0 K	\$22.0 K	13.6%
Volume (Units)			
	2,620+	3,480+	-24.7%
Median Age (Years)			
	5	5	No change
Median Usage (Hours)			
	1.7 K	1.8 K	3.7%
Top Selling Brands by Volume			
	Caterpillar	Caterpillar	No change
	Bobcat	Bobcat	No change
	Takeuchi	Takeuchi	No change
Top Makes & Models by Volume			
	Caterpillar 259D	Bobcat T590	Changed
	Bobcat T590	Caterpillar 259D	Changed
	Caterpillar 289D	Caterpillar 289D	No change
Buyer Locations			
Local (within state)	27%	29%	Down
Out-of-state	71%	69%	Up
International	2%	2%	No change

Numbers are approximate

Multi Terrain Loaders



The median price increased by 16%, with less volume in 2021. Out-of-province buying activity also increased, while international decreased.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$32.0 K	\$25.3 K	\$27.5 K	\$20.3 K	16.4%
Volume (Units)	445+		500+		-11.0%
Median Age (Years)	8		7		1 yr older
Median Usage (Hours)	2.7 K		2.8 K		3.2%
Top Selling Brands by Volume	Caterpillar Bobcat John Deere		Caterpillar Bobcat John Deere		No change No change No change
Top Makes & Models by Volume	Caterpillar 289D Bobcat T650 Case TR270		Catepillar 289D Bobcat T650 Kubota SVL902		No change No change Changed
Buyer Locations					
Local (same province)	59%		61%		Down
Out-of-province	30%		23%		Up
International	11%		16%		Down

Numbers are approximate

Skid Steer Loaders



In 2021, the median price rose by over 14% with a -20% decrease in volume. Out-of-state buying activity climbed, while in-state and international buying declined.

	2021	2020	Change
Median Price (USD)			
	\$15.5 K	\$13.5 K	14.8%
Volume (Units)			
	1,020+	1,305+	-21.8%
Median Age (Years)			
	9	7	2 yrs older
Median Usage (Hours)			
	2.5 K	2.1 K	-14.6%
Top Selling Brands by Volume			
	Bobcat	Bobcat	No change
	Caterpillar	Caterpillar	No change
	Case	Case	No change
Top Makes & Models by Volume			
	Bobcat S510	Bobcat S530	Changed
	Bobcat S650	Bobcat S650	No change
	Caterpillar 262D	Bobcat S70	Changed
Buyer Locations			
Local (within state)	37%	44%	Down
Out-of-state	57%	48%	Up
International	6%	8%	Down

Numbers are approximate

Skid Steer Loaders



Unlike other earthmoving categories, skid steer loader volume was flat in 2021 compared to 2020. Median pricing increased.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$19.5 K	\$15.7 K	\$17.0 K	\$12.7 K	14.7%
Volume (Units)	535+		535+		0.0%
Median Age (Years)	11		10		1 yr older
Median Usage (Hours)	2.5 K		3.1 K		19.2%
Top Selling Brands by Volume	Bobcat Caterpillar Case		Bobcat Caterpillar Case		No change No change No change
Top Makes & Models by Volume	Bobcat S650 Bobcat S510 Bobcat S185		Bobcat S650 Bobcat S750 Bobcat S300		No change Changed Changed
Buyer Locations	Local (same province) Out-of-province International		58% 26% 16%		63% 23% 14%
					Down Up Up

Numbers are approximate

Mini Excavators



The number of mini excavators sold in 2021 declined more than 24%, while pricing increased 17%.

	2021	2020	Change
Median Price (USD)			
	\$20.0 K	\$17.0 K	17.6%
Volume (Units)			
	1,645+	2,175+	-24.4%
Median Age (Years)			
	7	6	1 yr older
Median Usage (Hours)			
	1.8 K	1.7 K	-7.2%
Top Selling Brands by Volume			
	Bobcat	Bobcat	No change
	John Deere	John Deere	No change
	Caterpillar	Caterpillar	No change
Top Makes & Models by Volume			
	John Deere 27D	John Deere 27D	No change
	Bobcat E20	Kubota K0083	Changed
	John Deere 35D	Bobcat E32M	Changed
Buyer Locations			
Local (within state)	28%	31%	Down
Out-of-state	67%	66%	Up
International	5%	3%	Up

Numbers are approximate

Mini Excavators



Volumes sold in Canada decreased in 2021, with an increase in pricing over 2020 numbers.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$22.0 K	\$17.6 K	\$19.0 K	\$14.0 K	15.8%
Volume (Units)	315+		380+		-17.1%
Median Age (Years)	9		8		1 yr older
Median Usage (Hours)	1.0 K		1.6 K		36.0%
Top Selling Brands by Volume	Kubota Komatsu John Deere		Kubota Caterpillar John Deere		No change No change No change
Top Makes & Models by Volume	Cael 1T Kubota K0083 John Deere 35G		Kubota K0083 John Deere 35D Caterpillar 303.5E2 CR		No change Changed Changed
Buyer Locations					
Local (same province)	72%		70%		Up
Out-of-province	26%		23%		Up
International	2%		7%		Down

Numbers are approximate



A significant decline in units sold in 2021 vs. prior year (-32%) coupled with a 10% rise in pricing.

	2021	2020	Change
Median Price (USD)			
	\$31.0 K	\$28.0 K	10.7%
Volume (Units)			
	2,205+	3,255+	-32.3%
Median Age (Years)			
	8	7	1 yr older
Median Usage (Hours)			
	3.0 K	3.1 K	2.7%
Top Selling Brands by Volume			
	JLG Genie JCB	JLG Skytrak Genie	No change Changed Changed
Top Makes & Models by Volume			
	Genie GTH1056 JLG 10054 Genie GTH5519	Skytrak 10054 JLG G943A Genie GTH1056	No change Changed Changed
Buyer Locations			
Local (within state)	23%	27%	Down
Out-of-state	69%	68%	Up
International	8%	5%	Up

Numbers are approximate

Telehandlers



The age of telehandlers sold went from single to double digits in 2021 (9 to 12 years old). International buying activity declined in 2021.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$42.0 K	\$33.5 K	\$37.5 K	\$27.6 K	12.0%
Volume (Units)	360+		435+		-17.2%
Median Age (Years)	12		9		3 yrs older
Median Usage (Hours)	5.2 K		4.7 K		-10.9%
Top Selling Brands by Volume	Caterpillar JCB JLG		JCB Caterpillar JLG		Changed Changed No change
Top Makes & Models by Volume	Genie GTH1056 JLG G1055A Skytrak 10054		JLG G1055A Genie GTH844 Genie GTH1056		Changed Changed Changed
Buyer Locations					
Local (same province)	57%		50%		Up
Out-of-province	40%		38%		Up
International	3%		12%		Down

Numbers are approximate

Boom Lifts



The volume of boom lifts sold decreased by 33% in 2021, while pricing increased by 20%. The age of boom lifts sold remained flat last year.

	2021	2020	Change
Median Price (USD)			
	\$12.0 K	\$10.0 K	20.0%
Volume (Units)			
	4,215+	6,300+	-33.1%
Median Age (Years)			
	8	8	No change
Median Usage (Hours)			
	0.9 K	0.7 K	-18.8%
Top Selling Brands by Volume			
	Genie	Genie	No change
	JLG	JLG	No change
	Skyjack	Skyjack	No change
Top Makes & Models by Volume			
	JLG 600AJ	JLG 600AJ	No change
	Genie S65	Genie S60X	Changed
	JLG 800AJ	Genie S65	Changed
Buyer Locations			
Local (within state)	22%	30%	Down
Out-of-state	64%	58%	Up
International	14%	12%	Up

Numbers are approximate

Boom Lifts



Boom lifts sold in Canada declined by 20% last year and buying activity shifted from international to local markets.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$17.5 K	\$13.9 K	\$17.0 K	\$12.9 K	2.9%
Volume (Units)	895+		1,120+		-20.1%
Median Age (Years)	14		12		2 yrs older
Median Usage (Hours)	3.2 K		3.3 K		1.5%
Top Selling Brands by Volume	Genie JLG Skyjack		Genie JLG Skyjack		No change No change No change
Top Makes & Models by Volume	Genie Z6034 JLG 600AJ Genie Z4525		Genie Z6034 Genie Z4525J JLG 600AJ		Changed Changed Changed
Buyer Locations					
Local (same province)	68%		61%		Up
Out-of-province	24%		26%		Down
International	8%		13%		Down

Numbers are approximate



A significant decline in units sold in 2021 vs. prior year (-33%), while pricing increased by 12%. Out-of-state buying activity increased while local and international buying declined.

	2021	2020	Change
Median Price (USD)			
	\$3.5 K	\$3.1 K	12.9%
Volume (Units)			
	4,045+	6,095+	-33.6%
Median Age (Years)			
	8	7	1 yr older
Median Usage (Hours)			
	0.2 K	0.2 K	-5.0%
Top Selling Brands by Volume			
	Genie	Genie	No change
	Skyjack	Skyjack	No change
	JLG	JLG	No change
Top Makes & Models by Volume			
	Genie GS1930	Genie GS1930	No change
	Skyjack SJIII3219	Skyjack SJIII3219	No change
	GS2632	Genie GS2632	No change
Buyer Locations			
Local (within state)	30%	34%	Down
Out-of-state	57%	48%	Up
International	13%	18%	Down

Numbers are approximate

Scissor Lifts



The amount of scissor lifts sold declined by 25% over 2020.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$4.5 K	\$3.6 K	\$4.3 K	\$3.2 K	5.9%
Volume (Units)	815+		1,090+		-25.2%
Median Age (Years)	13		11		2 yrs older
Median Usage (Hours)	0.3 K		0.3 K		-3.5%
Top Selling Brands by Volume	Skyjack Genie JLG		Skyjack Genie JLG		No change No change No change
Top Makes & Models by Volume	Skyjack SJIII3219 Skyjack SJIII3226 Skyjack SJ3226		Skyjack SJIII3219 Skyjack SJ3219 Genie GS1930		No change Changed Changed
Buyer Locations					
Local (same province)	71%		69%		Up
Out-of-province	24%		23%		Up
International	5%		8%		Down

Numbers are approximate

Forklifts



In 2021, the volume of forklifts sold decreased dramatically, by more than 36% versus prior year.

	2021	2020	Change
Median Price (USD)			
	\$6.5 K	\$6.0 K	8.3%
Volume (Units)			
	3,185+	5,045+	-36.9%
Median Age (Years)			
	6	5	1 yr older
Median Usage (Hours)			
	3.3 K	3.8 K	12.7%
Top Selling Brands by Volume			
	Toyota	Toyota	No change
	Hyster	Hyster	No change
	Caterpillar	Caterpillar	No change
Top Makes & Models by Volume			
	Toyota 8FGCU20	Toyota 8FGCU25	No change
	Toyota 7FGCU25	Toyota 8FGCU30	No change
	Toyota 8FGCU25	Toyota 7FGCU25	No change
Buyer Locations			
Local (within state)	32%	34%	Down
Out-of-state	54%	54%	No change
International	14%	12%	Up

Numbers are approximate

Forklifts



The age of forklifts sold went from single to double digits in 2021 (9 to 13 years old), while prices increased by 22%.

	2021		2020		Change
Median Price	CAD	USD	CAD	USD	
	\$6.8 K	\$5.4 K	\$5.5 K	\$4.1 K	22.7%
Volume (Units)	670+		685+		-2.2%
Median Age (Years)	13		9		4 yrs older
Median Usage (Hours)	4.5 K		4.9 K		7.5%
Top Selling Brands by Volume	Hyster Toyota Caterpillar		Toyota Caterpillar Hyster		No change No change No change
Top Makes & Models by Volume	Toyota 8FGU25 Toyota 7FGU25 Toyota 8FGU30		Toyota 8FGU25 Toyota 7FGU25 Hyster S50XM		No change Changed Changed
Buyer Locations	Local (same province) Out-of-province International		69% 20% 11%		No change Up Down

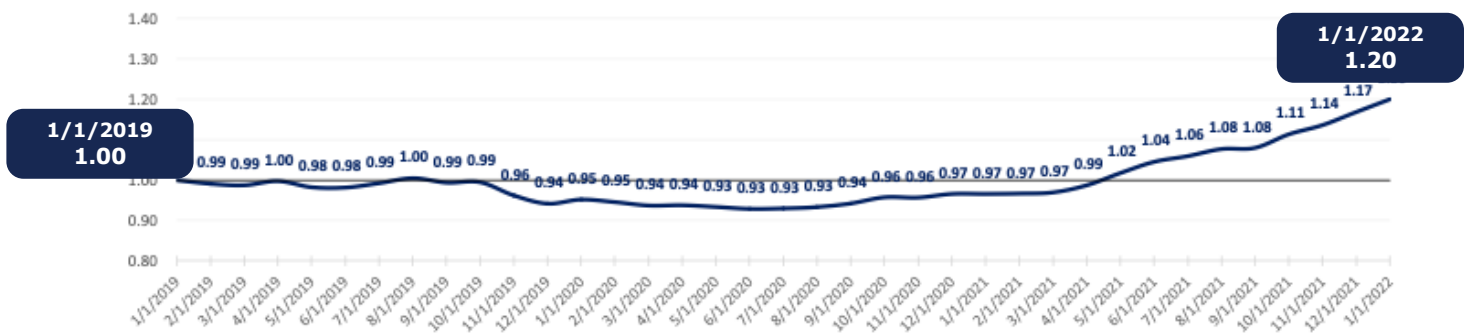
Numbers are approximate

So far in this edition we have looked at earthmoving and aerial equipment sold through Ritchie Bros. sales channels, including auctions and Marketplace-E. The Rouse indexes for both retail and auction pricing highlight similar upward trends.

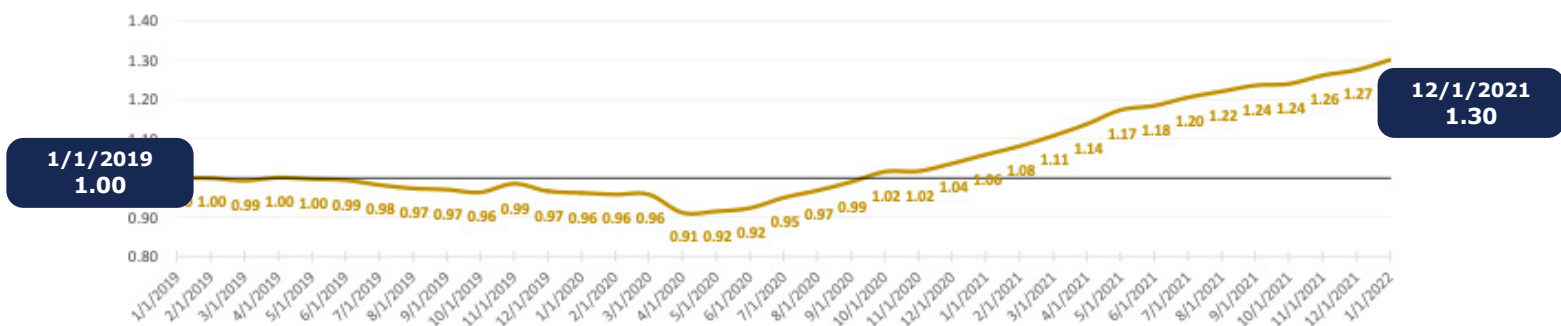
Retail values for heavy and medium earthmoving categories in the U.S. rose +2% and +3% respectively in the month of December. For aerial equipment, the values climbed +2%. Last year saw a strong pricing environment for retail sellers with values increasing as follows: heavy earthmoving (+15%), medium earthmoving (+23%) and aerial (+15%).

Auction values for the same categories also showed notable strength. From January through December, auction values in the U.S. grew by +22% for heavy earthmoving, +24% for medium earthmoving, and +22% for aerial equipment categories.

Rouse Retail Value Index: Earthmoving (Medium)

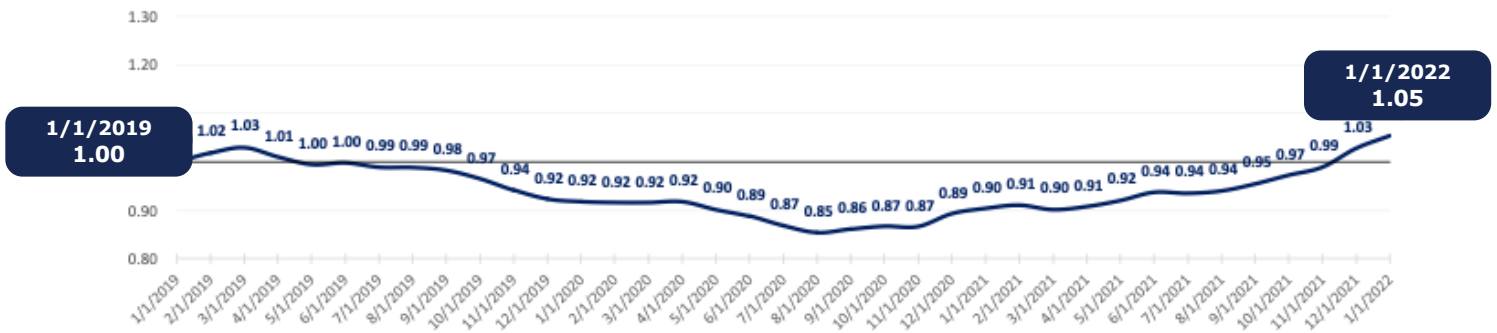


Rouse Auction Value Index: Earthmoving (Medium)

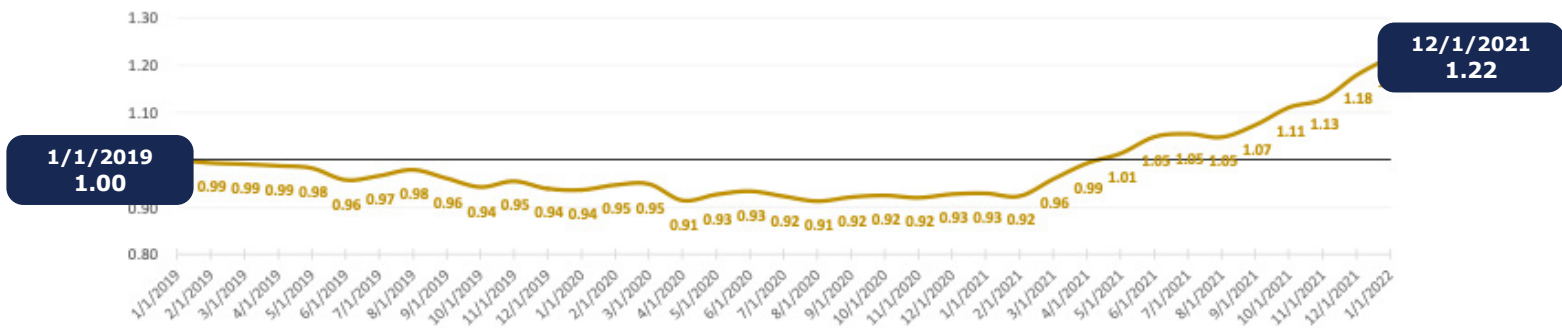


Used equipment (3-8 years old), USA only

Rouse Retail Value Index: Earthmoving (Heavy)

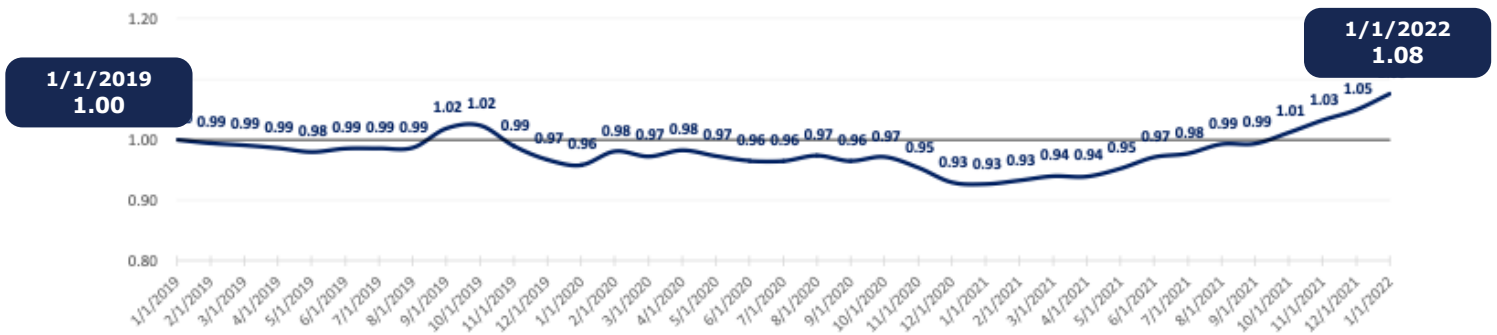


Rouse Auction Value Index: Earthmoving (Heavy)

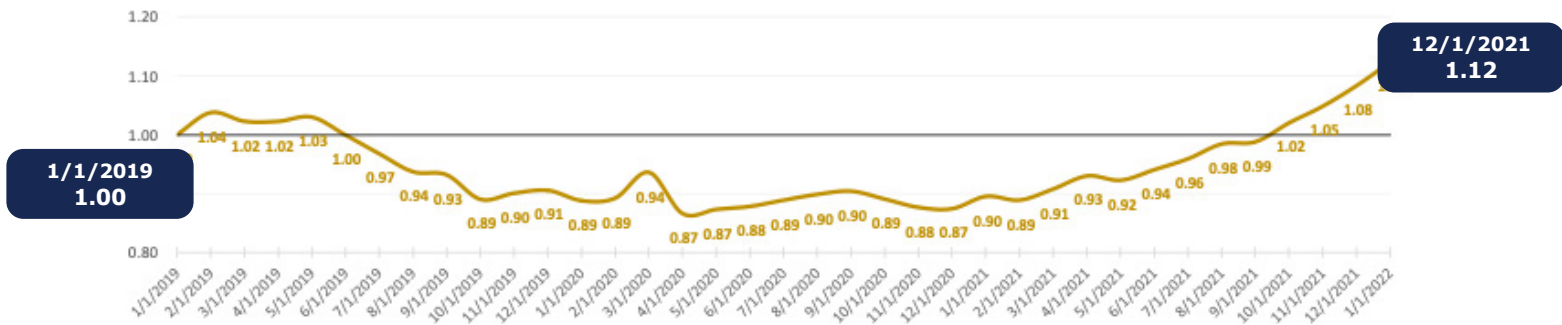


Used equipment (2-8 years old), USA only

Rouse Retail Value Index: Aerial



Rouse Auction Value Index: Aerial



Used equipment (3-8 years old), USA only

Ritchie Bros. Mixed Adjusted Price Indexes

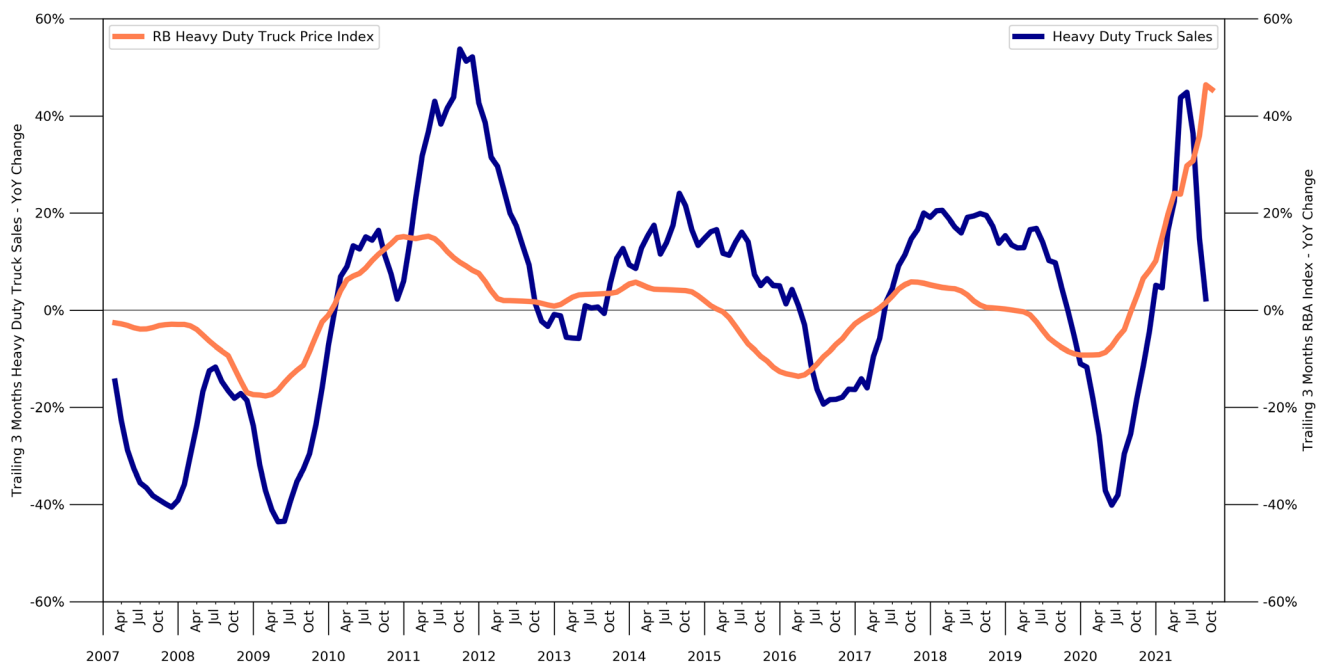
The trend of increasing price inflation continues this month particularly in the U.S. driven by truck tractors and forklifts. The price inflation has slowed down in other categories like vocational trucks and medium earthmoving. Agriculture categories seem to be stabilizing. In Canada, we still see increasing price inflation in truck tractors with high percentage jump this month (this month: 37%, last month: 26%) but the other categories seem to be stabilizing.

Medium earthmoving equipment continues to show higher pricing compared to large earthmoving in the U.S. and Canada. The delta between the two remains same at 28 percentage points in the U.S. and increased to 24 percentage points in Canada.

The increasing price inflation observed in U.S. is maximum in the truck tractors category compared to last month (this month: 65%, last month: 55%). This increasing trend has been observed in several other categories like forklifts (this month: 77%, last month: 72%) and aerial (this month: 41%, last month: 37%).

Indexes are validated by correlating with key industry metrics:

We validate our used pricing indexes by correlating them against well-followed industry metrics such as sales or orders. In this example, the U.S. Ritchie Bros. Heavy Duty Truck price index is plotted vs the U.S. Heavy Duty Truck Sales index. The correlation between the two is clear, with the price index leading the sales index. Recent periods have been affected by supply shortage of heavy duty trucks.



Sources: Ritchie Bros. Mix-Adjusted Price Index; Heavy Weight Truck Sales U.S. Bureau of Economic Analysis

Truck Tractors & Vocational Trucks – U.S.



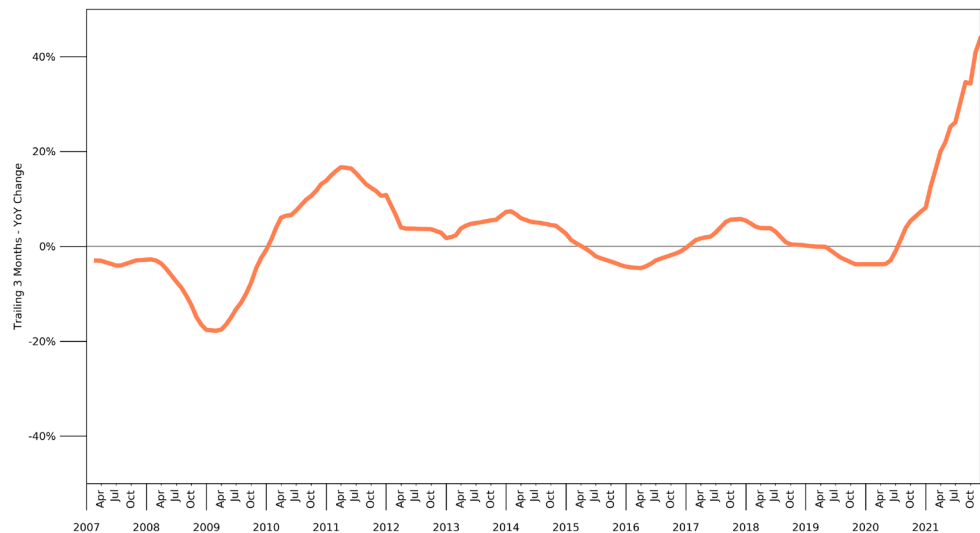
Prices show strengthening for used truck tractors

In our estimation, for the 3 months ending December, prices for used truck tractors increased 65% ($\pm 1.5\%$) compared to the same time frame last year.

Truck tractors (S/A, T/A, Tri/A)

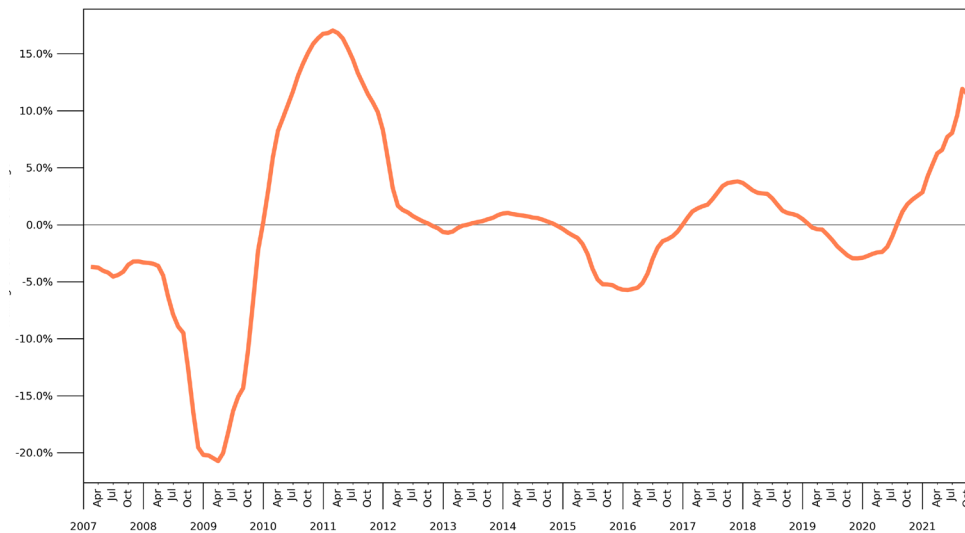
Prices show strengthening for used vocational trucks

In our estimation, for the 3 months ending December, prices for used vocational trucks increased 44% ($\pm 1.5\%$) compared to the same time frame last year.



Flatbed Trucks, Dump Trucks (S/A, T/A, Tri/A, Quad/A), Mixer Trucks (S/A, T/A, Tri/A, Quad/A), Van & Reefer Trucks, Mechanics Trucks, Utility Trucks

Large Earthmoving & Medium Earthmoving – U.S.



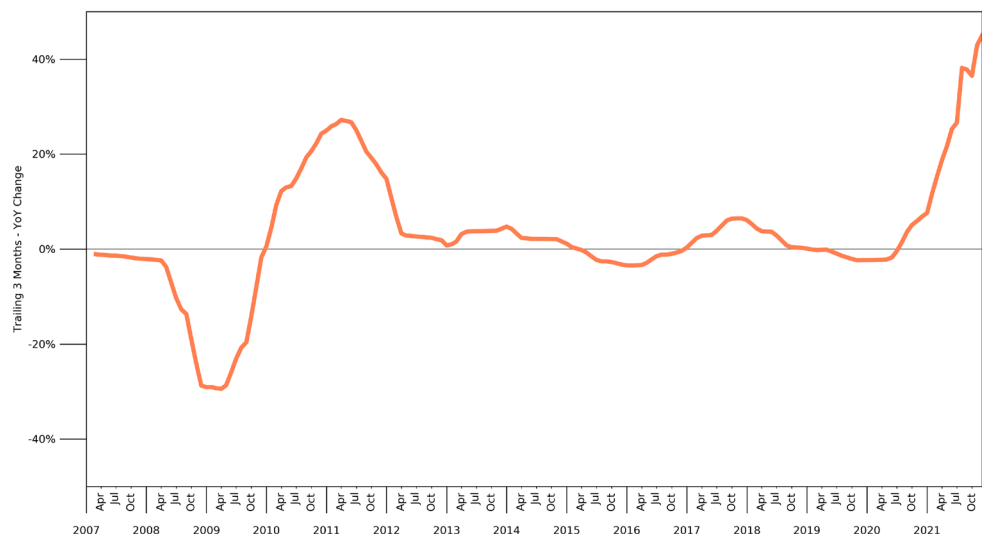
Prices show strengthening for used large earthmoving equipment

In our estimation, for the 3 months ending December, prices for used large earthmoving equipment increased 16% ($\pm 1.5\%$) compared to the same time frame last year.

Excavators, Dozers, Wheel Loaders, Backhoe Loaders, Articulated Dump Trucks, Motor Graders, Scrapers, Wheel Excavators, Wheel Dozers, Track Loaders, Soil Compactors

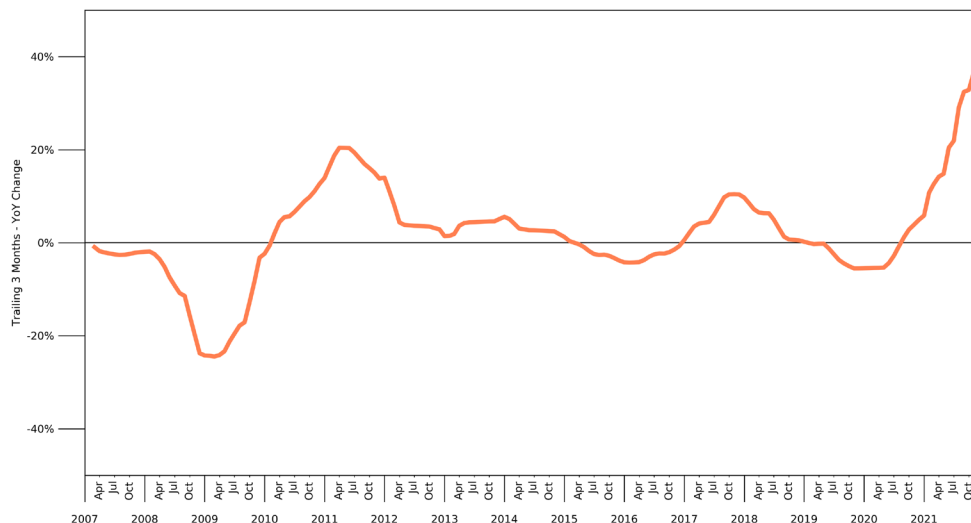
Prices show strengthening for used medium earthmoving equipment

In our estimation, for the 3 months ending December, prices for used medium earthmoving equipment increased 45% ($\pm 1.5\%$) compared to the same time frame last year.



Skid Steer Loaders, Compact Track Loaders, Micro Excavators, Mini Excavators, Midi Excavators

Aerial Equipment – U.S.

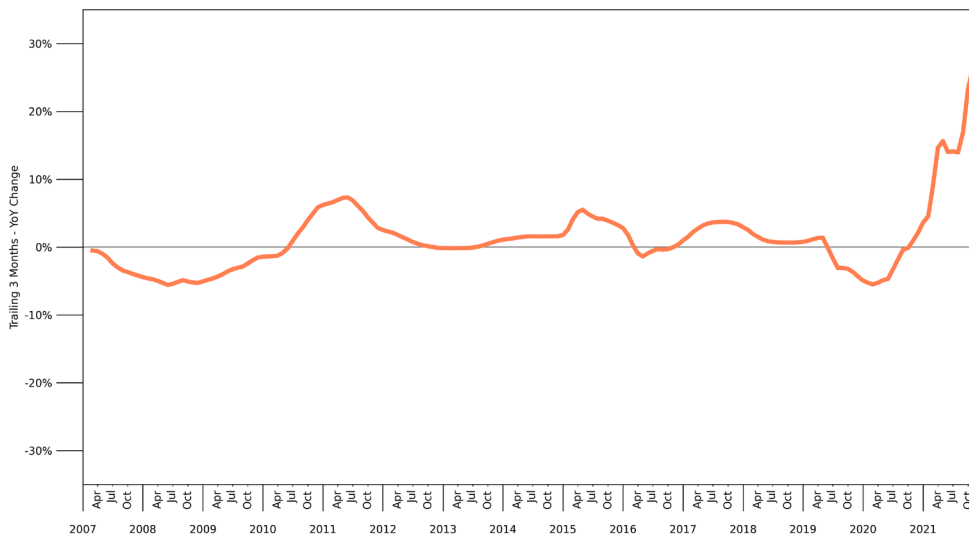


Prices show strengthening for used aerial equipment

In our estimation, for the 3 months ending December, prices for used aerial equipment increased 41% ($\pm 1.5\%$) compared to the same time frame last year.

Scissor Lifts, Boom Lifts, Telehandlers

Truck Tractors & Vocational Trucks – Canada



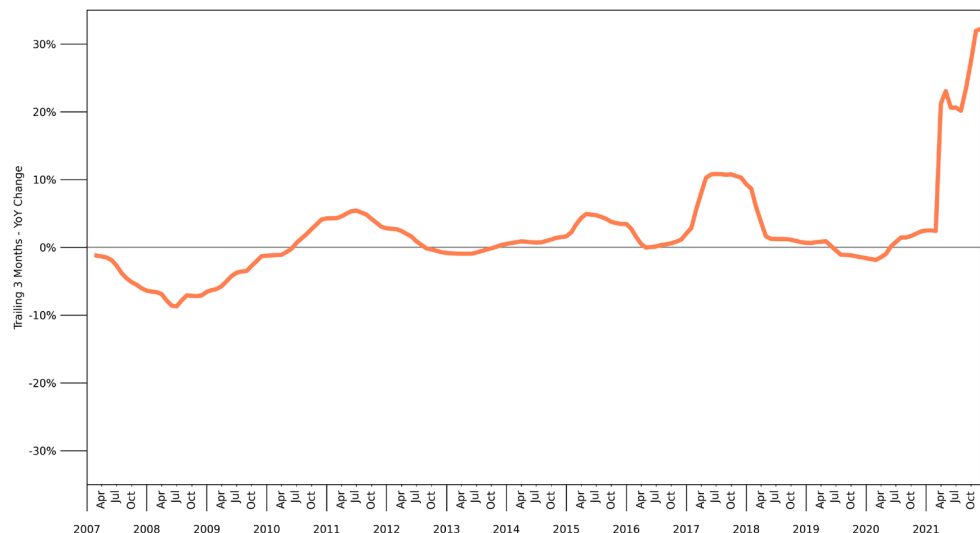
Prices show strengthening for used truck tractors

In our estimation, for the 3 months ending December, prices for used truck tractors increased 37% ($\pm 1.5\%$) compared to the same time frame last year.

Truck tractors (S/A, T/A, Tri/A)

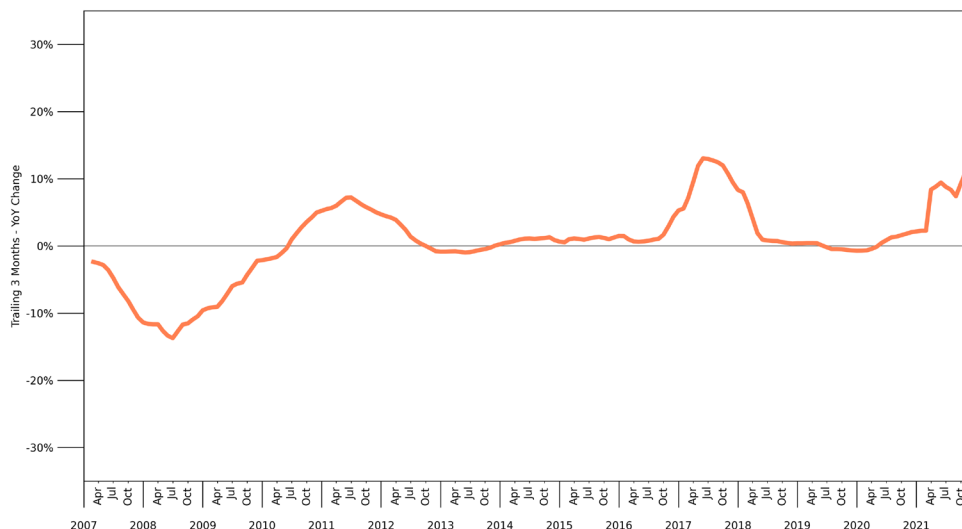
Prices show strengthening for used vocational trucks

In our estimation, for the 3 months ending December, prices for used vocational trucks increased 32% ($\pm 1.5\%$) compared to the same time frame last year.



Flatbed Trucks, Dump Trucks (S/A, T/A, Tri/A, Quad/A), Mixer Trucks (S/A, T/A, Tri/A, Quad/A), Van & Reefer Trucks, Mechanics Trucks, Utility Trucks

Large Earthmoving & Medium Earthmoving – Canada



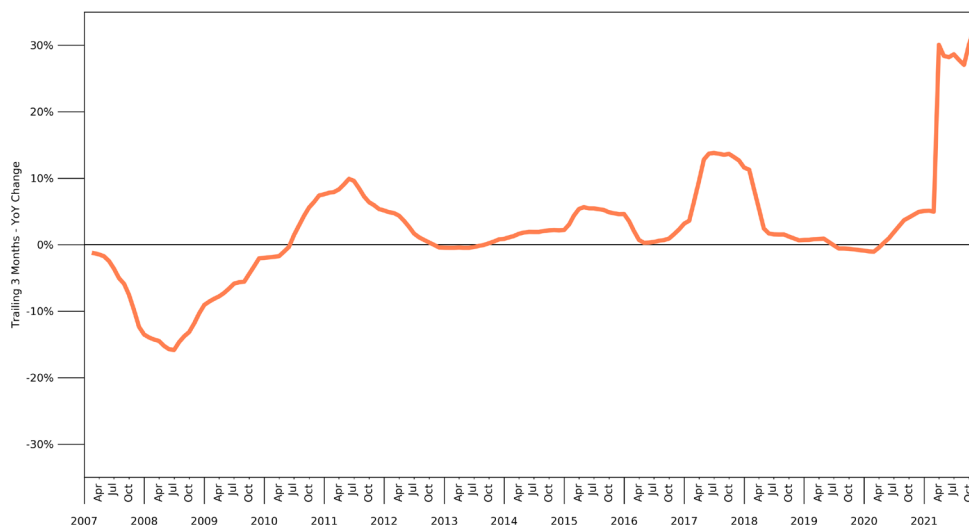
Prices show strengthening for used large earthmoving equipment

In our estimation, for the 3 months ending December, prices for used large earthmoving equipment increased 10% ($\pm 1.5\%$) compared to the same time frame last year.

Excavators, Dozers, Wheel Loaders, Backhoe Loaders, Articulated Dump Trucks, Motor Graders, Scrapers, Wheel Excavators, Wheel Dozers, Track Loaders, Soil Compactors

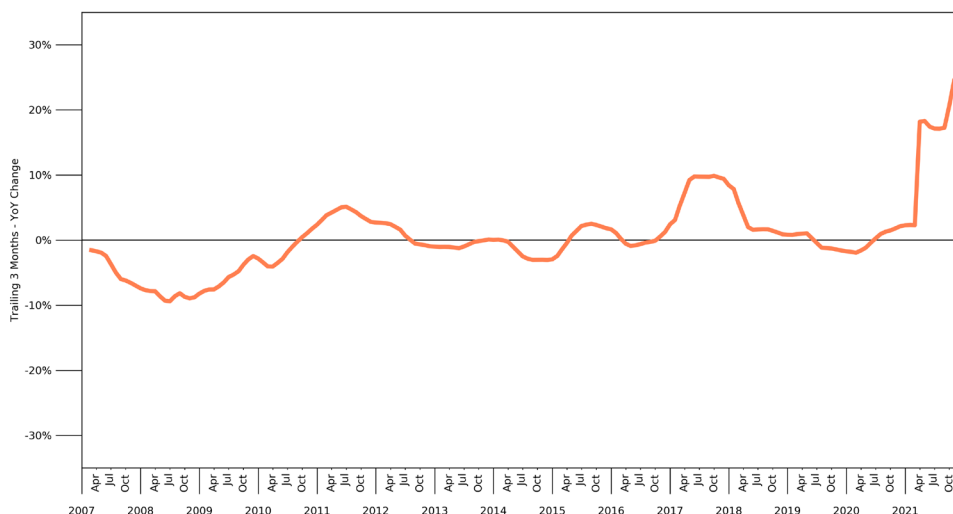
Prices show strengthening for used medium earthmoving equipment

In our estimation, for the 3 months ending December, prices for used medium earthmoving equipment increased 35% ($\pm 1.5\%$) compared to the same time frame last year.



Skid Steer Loaders, Compact Track Loaders, Micro Excavators, Mini Excavators, Midi Excavators

Aerial Equipment – Canada



Prices show strengthening for used aerial equipment

In our estimation, for the 3 months ending December, prices for used aerial equipment increased 26% ($\pm 1.5\%$) compared to the same time frame last year.

Scissor Lifts, Boom Lifts, Telehandlers

Methodology: Ritchie Bros. uses a machine learning-based method to calculate a used price index:

To isolate and measure the change in supply / demand dynamics on prices over time, we use various machine learning techniques to correct for equipment mix such as make, model, age, as well as 100+ features.

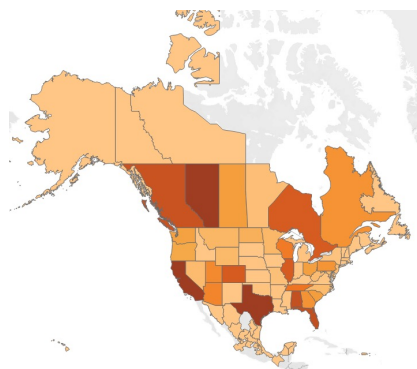
- ▶ 1.8 million transactions
- ▶ Data from 2005 onwards
- ▶ Adjusting for 100+ features
- ▶ Includes data from the U.S. and Canada

Ritchie Bros. Market Trends module:

- ▶ Articulated dump trucks
- ▶ Composite
- ▶ Dozers
- ▶ Forklifts
- ▶ Loaders
- ▶ Skid Steers

Seller & buyer maps for the 3 months ending December 31, 2021ⁱ

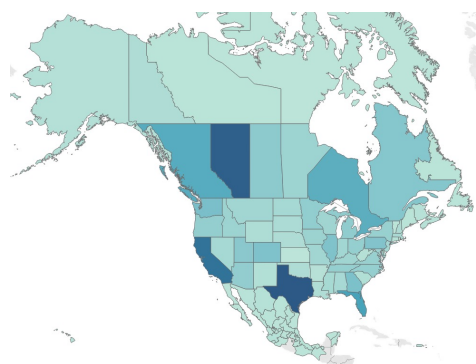
Seller Map – North America



Top 5 selling regions:

- ▶ Texas, USA
- ▶ Alberta, Canada
- ▶ California, USA
- ▶ Florida, USA
- ▶ Alabama, USA

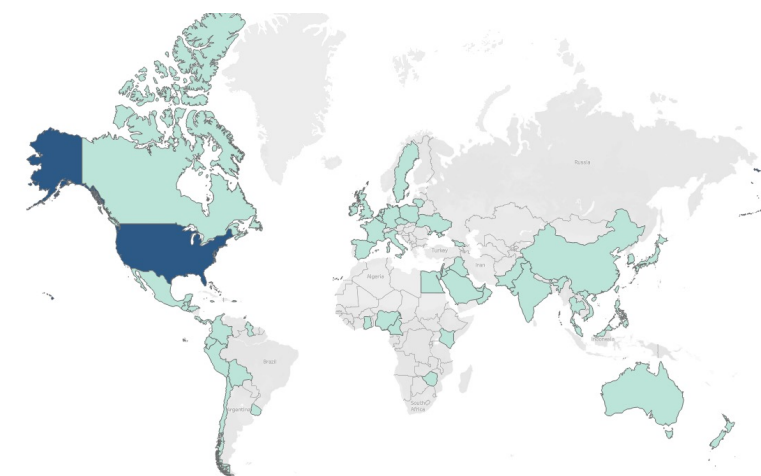
Buyer Map - North America



Top 5 buying regions:

- ▶ Texas, USA
- ▶ Alberta, Canada
- ▶ California, USA
- ▶ Florida, USA
- ▶ British Columbia, Canada

Buyer Map - World Wide



Top 5 buying countriesⁱⁱ:

- ▶ Mexico
- ▶ Peru
- ▶ Australia
- ▶ United Arab Emirates
- ▶ New Zealand

ⁱBased on value of transactions (USD) ⁱⁱOutside United States and Canada

About Ritchie Bros.

Ritchie Bros. connects equipment buyers and sellers through a global network of auction facilities and online sales channels. Ritchie Bros. Auctioneers and IronPlanet bring you multi-channel, trusted solutions that are transparent, fair and convenient.



Unreserved live auctions

- ▶ 40 auction sites globally with secured storage & buyer inspection
- ▶ 350+ live unreserved auctions a year
- ▶ Certainty of sale



Weekly online auctions

- ▶ Regular weekly auctions
- ▶ Convenience of selling where it sits
- ▶ Buyer confidence from IronClad Assurance® equipment condition certification



Reserved online marketplace

- ▶ Control over your selling price & timing of sale
- ▶ Convenience of selling where it sits
- ▶ Buyer confidence from IronClad Assurance® equipment condition certification



Self-serve equipment and truck listings

- ▶ Easy-to-use interface, multiple ways to upload, secure transaction option
- ▶ Access to powerful pricing tools & market data
- ▶ No paid ad obligations, affordable monthly subscription



Inventory, data insights & disposition platform

- ▶ Inventory management system
- ▶ Market trends and pricing tools
- ▶ Maximize value of equipment through choice of disposition



Data intelligence & performance benchmarking solutions

- ▶ Rental analytics
- ▶ Equipment sales support
- ▶ Fleet appraisals



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