

# Operating costs

Total cost counted on hours	Elise 900	Bobcat S 570 Interim/Final Tier 4	CAT 232 D 3 Interim Tier 4	JCB 190 Tier 4 Final/210	John Deere 318G/E Interim Tier 4	Case SR210 (Tier 4)	Kubota SSV 65 (Cab - ISO/Canopy) Tier 4 Final	Wacker Neuson SW20	Gehl R 190 Tier 4 Final	New Holland L 220 Tier 3/4 Final	Volvo MC 95 C Interim Tier 4/Tier 4 Final	Mustang 1900 R Tier 4 Final/2056 Series 2 Interim Tier 4
1	\$1,66	\$7,66	\$7,66	\$7,66	\$7,66	\$7,66	\$7,66	\$7,66	\$7,66	\$7,66	\$7,66	\$7,66
Savings together		<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>	<b>\$6,00</b>
Costs after 500	\$6 067,48	\$8 836,90	\$8 430,00	\$8 556,30	\$7 810,00	\$8 030,00	\$8 120,00	\$7 930,00	\$8 730,00	\$8 580,00	\$7 330,00	\$7 830,00
Savings together		<b>\$2 769,43</b>	<b>\$2 362,53</b>	<b>\$2 488,83</b>	<b>\$1 742,53</b>	<b>\$1 962,53</b>	<b>\$2 052,53</b>	<b>\$1 862,53</b>	<b>\$2 662,53</b>	<b>\$2 512,53</b>	<b>\$1 262,53</b>	<b>\$1 762,53</b>
Costs after 1000	\$12 134,95	\$17 673,80	\$16 860,00	\$17 112,60	\$15 620,00	\$16 060,00	\$16 240,00	\$15 860,00	\$17 460,00	\$17 160,00	\$14 660,00	\$15 660,00
Savings together		<b>\$5 538,85</b>	<b>\$4 725,05</b>	<b>\$4 977,65</b>	<b>\$3 485,05</b>	<b>\$3 925,05</b>	<b>\$4 105,05</b>	<b>\$3 725,05</b>	<b>\$5 325,05</b>	<b>\$5 025,05</b>	<b>\$2 525,05</b>	<b>\$3 525,05</b>
Costs after 2000	\$19 031,90	\$30 340,70	\$29 120,00	\$29 498,90	\$27 260,00	\$27 920,00	\$28 190,00	\$27 620,00	\$30 020,00	\$29 570,00	\$25 820,00	\$27 320,00
Savings together		<b>\$11 308,80</b>	<b>\$10 088,10</b>	<b>\$10 467,00</b>	<b>\$8 228,10</b>	<b>\$8 888,10</b>	<b>\$9 158,10</b>	<b>\$8 588,10</b>	<b>\$10 988,10</b>	<b>\$10 538,10</b>	<b>\$6 788,10</b>	<b>\$8 288,10</b>

## Approach:

1. Searching for most trusted/wanted brands of Skid Steer Loader in the USA market.
2. Extracting top brands with direct competitors with our Elise 900 model.
3. Research among forums, magazine, professional websites which are aimed on construction equipment.
4. Setting up metrics based on which we can measure operating costs.
5. Finalization of the operating cost to one table

## Conclusion:

1. Based on several studies the US market has several “love brands“ starting with Bobcat, CAT, CASE, JCB, Kubota and etc. More information about most popular brand in this following link: <https://equipmentwatch.com/intel/equipment-values-market-data/brand-premiums-ten-popular-skid-steer-loader-brands/>. This is just one of the pages with studies it is not 100% reliable.
2. Choosing right competitors for Elise 900 was set up by ROC (Rated Operating Capacity). World is moving forward on more ecological approach and due to this and moreover due to regulations competitors to Elise 900 must produce engines with PDF (in car industry DPF) filters. This types of diesel engines are called Interim Tier 4 or Final Tier 4 engines. All new machines should have this new generation of engines.
3. Research was done on forums because of users experience with competitor brands. Users can be too subjective and for this purpose were used professional articles, case studies, magazine and online platforms. Based on this information we found that most common system for measuring the operating cost for one working hour is following:

a.  $\text{Avg. consumption} + \text{Tires costs} + \text{Maintenance costs} + \text{Down price} = \text{Costs for one operating hour}$

This formula might looks simple but behind each variable is another formula which give us final cost on 1 operating hour. Each variable is counted with numbers from from users experiences or expert case studies. For some of them we used our competitors websites.

4. The most common model for counting the operating cost is based on working hours. No days or months are included because of different uses and owners can run machines differently during the year. The starting number is 1 working hour the we continue on 500 working hours and we ended with 2000 working hours which is the milestone on 90% warranties of each skid steer loader in the table. In this case is Elise 900 little bit limited - the warranty is 1500 working hours what is 500 less than we can see on other brands. One of the hardest variable and probably it is variable that is hard to count on each brand is Down Price. As Down Price we mean price after putting hours on skid steer and then selling this machine on market. We can see differences on marketplace for used skid steer loader but the price is normally counted as 10% down price after 500 hours, 20% down price after 1000 hours, 30% after 2000 hours. This is variable which is hard to count and we came with formula from electric cars and their down price combine with skid steer loaders which we applicate on our Electric SSL. It is just hypothetical due to lack of used Elise 900 on the market. When we are talking lack of we can say as for right now there is non used Elise 900 for sale.

5. This table is connected to the master document where are separate tables with different costs. Saving and prices are coming from conclusion from internet and our experiences.

Useful links for inspiration:

1. <https://www.constructionequipment.com/small-skid-steer-loaders-offer-big-choices>
2. <https://www.equipmentworld.com/owning-and-operating-costs-compact-track-loaders/>
3. <https://www.equipmentworld.com/how-the-skid-steer-is-staying-relevant/>
4. Case has awesome virtual guides:
  - a. <https://online.fliphtml5.com/kkbp/phir/#p=1>
  - b. <https://tco.casece.com/northamerica/en-us/skid-steer-loaders/sr210> - this one is useful
5. John Deere compare page with competitors:
  - a. <https://www.deere.com/en/loaders/skid-steers/318g-skid-steer/>

Feel free to add any comments or questions.