

COMPACT LOADERS AND SKID STEERS



WHICH IS RIGHT FOR YOU?

There is a place for both compact loaders and skid steers on the jobsite. But in specific instances, one will perform much better than the other. Here's an overview of the strengths and limitations of each.

BASIC DIFFERENCES AND SIMILARITIES

For this article, we're using the term "compact loader" to mean a compact wheel loader with four-wheel drive, and steers by articulating the front and rear chassis. "Skid steers" have four tires, and steer by braking or reversing one side and skidding the other side.

Both compact loaders and skid steers are very versatile machines that handle a variety of attachments and are sold for a wide range of applications. Both use buckets as a primary attachment, but the sky is the limit as far as the type of attachments that can be used. As a result, both kinds are normally equipped with a Quick Coupler. Both can use a Universal Coupler with a common interface for a variety of attachments.



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SPECIFICATIONS

For the sake of comparison, Bobcat Skid Steers will be used here. Skid-steer loaders use rated capacity rather than bucket capacity as a sizing parameter. Most compact loaders also publish rated capacity. Below you will see the Bobcat models that come the closest to matching the Hitachi Compact Loaders from a rated capacity standpoint.

As you can see, compact loaders have more tipping load (stability) and more reach to allow for easier loading into a truck or hopper. Compact loaders travel faster than skid steers too. Not only is the top speed of the machine higher, but the comfort level is better in a compact loader, which allows the operator to travel at these higher speeds comfortably. This makes

load-and-carry type operations much more practical for a compact loader.

You can also see that compact loaders tend to be bigger and heavier than skid steers. This gives skid steers some advantage for transporting. It also allows skid steers to get into tighter areas than compact loaders. Skid steers have a definite maneuverability advantage over the compact loader. The turning radius is half that of the loader. Since skid steers can turn in place, they can handle very tight conditions well.

Applications that favor skid steers include tight operating conditions, muddy ground conditions, and pallet fork usage. Those that favor compact loaders are truck/hopper loading, load and carry, and excavating.

SPEC COMPARISON

	Hitachi ZW50	Bobcat S250	Hitachi ZW80	Bobcat S300	Bobcat S630	Bobcat S650	Bobcat S750	Bobcat S770
HP	48	75	63	81	74.3	74.3	85	92
Rated Cap. (lbs.)	3,033.9	2,500	3,044.1	3,000	2,180	2,690	3,200	3,350
Tipping Load (lbs.)	4,760	5661	7,170	6,111	4,360	5,380	6,400	6,700
Operating Weight (lbs.)	9,250	7,825	12,210	8,268	7,707	8,327	8,730	9,175
Travel Speed (mph)	10.6	6.9	21.1	6.9	7.1	7.1	7.1	7.1
Width (in.)	66	72	78	72	72.1	72.1	72.1	72.1
Height (in.)	100.8	80.9	112.8	80.9	81.3	81.3	81.3	81.3
Hinge Pin Height (in.)	123.6	128.8	124.8	128.8	121	124.1	32	132
Reach (in.)	39.6	34	38.4	34	21.4	31.5	31.5	31.5
Turning Radius (in.)	152.3	84.2	178.7	86.2	83.4	82.9	85.8	85.8
Wheelbase (in.)	73.2	48.3	86.4	48.3	45.3	45.3	45.3	45.3



HITACHI'S COST ADVANTAGE

Hitachi Construction Machinery Loaders America compact loaders are very simple, high-quality, reliable and productive machines. They don't have a lot of bells and whistles. The simplicity of these units is the most attractive customer benefit. According to Hitachi, customers don't want fancy if it means more maintenance, more downtime and more cost. Hitachi machines are used sporadically during the day. Hop on to load a customer truck. Hop off. No need for fancy cabs or a lot of features that the operator may never need. Simple means virtually no electronic systems. Simple also means an emissions system with no DPF or SCR to worry about.

FUEL EFFICIENCY

Skid steers demand more horsepower because of its mode of steering, as well as typically being operated at full throttle or high rpms. Skid steers also need that added horsepower to generate a greater volume of auxiliary-hydraulic flow than do most comparably sized compact wheel loaders. Compact wheel loaders, in contrast, are more fuel efficient. Articulation doesn't demand a lot of power, and the engine is revved only when the throttle is used.

DURABILITY

The design life, or useful life, of a compact loader is much greater than that of a skid steer. A compact loader can run for 6,000 to 8,000 hours in most applications. Most skid steers are used for only about 5,000 hours before they are retired.

And tire life is much better on a compact loader than on a skid steer. It is just a characteristic of the steering systems. Skidding the tires is much tougher on tires than the smooth steering of an articulated loader.

New Hampshire-based landscape supply firm gains customers throughout New England

Equipment downtime is far less of a problem than it used to be for The Dirt Doctors. When purchasing his Hitachi ZW80 wheel loader, he replaced a unit boasting more than 5,000 hours. Therefore, he knew it was important to add a machine to the fleet that his operators could run comfortably for long hours, but would also minimize downtime. "We run our Hitachi seven days a week, 15 hours a day, and it just goes," he says.

The agile ZW80 offers the right combination of power and performance for their operation. A powerful, fuel efficient engine that enables Anastasy's crew to work all day, allied with a 7.8-foot dumping clearance and 3.2-foot dumping reach, is the right matchup for loading applications at The Dirt Doctors' facility.



Hitachi ZW80 compact wheel loader right at home in 'Pure Michigan'

Replacing a competitive model, the new ZW80 is part of a construction fleet of more than 30 excavators, skid-steer loaders, compact track loaders and wheel loaders. Drost Landscape also owns and operates fleets of trucks, as well as specialized equipment germane to company divisions such as tree service and maintenance.



Robiadek raves about the design of the ZW80. He notes the modern exterior sloping and pillarless cab design with floor-to-ceiling glass provide clear visibility all around the machine, "and with a smaller counterweight, you don't have to worry as much about turning around and hitting something. When you're in a tight area such as this, you can see all around you and make sure you're clear."

At this jobsite, the ZW80 was maximizing its 63 hp of engine output and 8,280 pounds of breakout force to load, move and dump snow, dirt and building materials, as well as to load trucks, which it can still comfortably do at its compact size.

PRICE

Initial purchase price is lower for a skid steer compared to a compact loader. But when you look at it on a cost-per-hour of useful life, the compact loader price is very competitive.



SUMMARY

The skid steer is more maneuverable, has better forward visibility, and better flotation.

The compact loader has more operator comfort, better overall visibility, larger cab, smoother ride, better breakout force, faster travel speeds, better bucket-load retention, better cycle times in load and carry, lower tire/track costs, no chain or belt maintenance, lower owning cost per hour, lower operating costs, and better resale value. It

is also more productive and has a better reach, making it easier for truck/hopper loading applications. Finally, although it has a higher initial price, its longer life results in a lower cost per hour.

So if you are in the market for either a skid steer or compact wheel loader, determine the kinds of applications for which you need it most, pick what features are important to you, and decide how long a life you need it to have. Then choose accordingly.



OVERVIEW OF FEATURES AND PERFORMANCE

FEATURE	SKID STEER	COMPACT LOADER
Cab	Low to ground, entry through front. Canopy style can admit bucket spillage and dust.	Higher off the ground, entry through side doors. Larger and more comfortable. Protection from outside elements.
Visibility	Very good to the front, poor to sides and back. Must always look up to see attachment at full height.	Good in all directions. Spotting attachment at full height easy due to higher eye level of cab.
Kind of drive	Belt- or chain-driven drive can be choppy. Need more intensive maintenance.	Hydrostatic drive results in smoother controllable power. Not as maintenance-heavy.
Ground clearance	Low; rigid axles.	High; oscillating rear axles. Easier to travel over rough terrain.
PERFORMANCE	SKID STEER	COMPACT LOADER
Steering	More impact to operating surface.	Less impact on operating surface for less damage to turf or ground conditions.
Digging power/ Breakout force	Bucket shape has a very long floor and short back. This helps improve the reach and allow it to dump into a truck or hopper better. But it is not an ideal digging bucket. More prone to back spillage and hard to travel with a full bucket.	Bowl-shaped bucket is better suited for digging, travel, and material handling.
Reach	Okay.	Much better. Easier for loading trucks and hoppers, especially at low heights.
Severe traction conditions	In muddy and sloppy conditions, excellent maneuverability due to lower weight and better flotation.	Okay.

A FULL LINE OF WHEEL LOADERS

- 13 Models
- 30 HP–531 HP

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Loaders America Inc.
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