

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.

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 Kawasaki 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.

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.

SPEC COMPARISON

	Kawasaki 42ZV-2	Bobcat S250	Kawasaki 45ZV-2	Bobcat S300	Bobcat S630	Bobcat S650	Bobcat S750	Bobcat S770
HP	45	75	61	81	74.3	74.3	85	92
Rated Cap. (lbs.)	2380	2500	3585	3000	2180	2690	3200	3350
Tipping Load (lbs.)	4760	5661	7170	6111	4360	5380	6400	6700
Operating Weight (lbs.)	9250	7825	12220	8268	7707	8327	8730	9175
Travel Speed (mph)	10.5	6.9	21.1	6.9	7.1	7.1	7.1	7.1
Width (in.)	66.5	72	75.6	72	72.1	72.1	72.1	72.1
Height (in.)	101	80.9	112.6	80.9	81.3	81.3	81.3	81.3
Hinge Pin Height (in.)	123.6	128.8	124.3	128.8	121	124.1	32	132
Reach (in.)	39.2	34	40	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.)	72.2	48.3	86.6	48.3	45.3	45.3	48.3	48.3



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.

Not all compact loaders are the same! A salesman from a Kawasaki dealership in Florida put a Komatsu WA80 and Kawasaki 45ZV-2 side by side. Here are his observations.

“The Kawasaki has a wider stance and the loader arms are set wider apart for added torsional rigidity. The operator sits a few inches higher and has a much better view of the front and rear corners. The Kawasaki has two steering cylinders and the WA80 has only one. The WA80 has slightly taller tires. The 45ZV-2 has the counterweight positioned lower to the ground, possibly offering increased stability and better protecting the undercarriage when backing up. The Kawasaki has simpler cable-operated loader hydraulics and the Komatsu has pilot operated. The 45ZV-2 also has more accessible engine and drivetrain components for easier servicing.” — Steve Tuton, GS Equipment.

