

# Skid Steer Loader Purchasing Guide



# Introduction to the Storage Container Buying Process

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### Introduction

Skid steers have always been a highly functional piece of heavy equipment. But with the drive toward cost-savings and a focus on increased productivity (with a smaller workforce), skid steers are really coming into their own.

Accepting dozens of attachments that are capable of everything from plowing snow to pouring cement, skid steer loaders represent one of the most versatile machines you can buy. Equally suited to landscaping and grounds keeping as they are to larger construction and industrial applications, loaders are prized for their compact size, maneuverability, and cost-effective operation, easily jumping from one task to another through quick-coupler attachments.

# **Leading manufacturers and dealers**

Many people refer to a skid steer simply as a "Bobcat." Though Bobcat is one of the leading manufacturers, there are almost a dozen other companies that currently produce the machines as well, including John Deere, Caterpillar, Gehl, and JCB. These manufacturers support a wide range of exclusive dealers, not to mention the countless independent outfits that also provide skid steers and attachments.

While performance and cost are important, the dealer you select is equally as important – directly impacting the effectiveness and ROI of your investment by minimizing the total cost of ownership well into the future. When comparing skid steer dealers, use the following three considerations as your litmus test:

1. **Support and maintenance** - A service level agreement (SLA) establishes the frequency and specifics of the post-sale support you receive – service that's critical to keep the machine functioning properly and avoid downtime. Your SLA sets the costs associated with technician time and material, basic scheduled maintenance, complete scheduled

maintenance (encompassing all operating systems), and additional services that check everything from the tip of the forks to the rear fender. It may also specify the parts you receive (name brand or comparable generic), warranties, and customer service response times. Make sure all aspects of service and their associated costs are spelled out.

- 2. Expandability One of the primary benefits of having a quality dealer in your corner is realized when you want to expand your operation. A dealer who knows your business and its specific needs can easily supply additional equipment and help you build your fleet in the most productive and cost-effective way possible. He or she may also be able to advise you on specs or attachments that can further supplement your process, saving you money while getting you to your goals that much faster. Plus, by expanding within the same line of skid steers, you eliminate the need for additional operator training on unfamiliar machines.
- 3. **Attachments** It can easily be said that attachments make the skid steer. Transforming a single machine into one that's capable of dozens of potential applications, attachments are largely responsible for the skid steer's enduring (and increasing) popularity. As a result, leading dealers have begun to bulk up on both the attachments they offer for sale as well as those that can be rented. We'll cover attachments in detail below. But know in advance that a wide selection is a good indicator of a quality dealer.

Before we get into attachments and specs, it's important to consider some of the recent and future trends associated with skid steers. These technologies and developments will directly affect the purchase of any new model, as well as those manufactured in the last five years. We've also included a series of additional considerations that can help you choose the best skid steer dealer and post-sale support, quickly and effectively. Let's get started!

# **Trends**

Technology changes quickly, always chasing the latest time- and cost-saving innovations. In small electronic items, like laptops and mobile phones, replacing an older model isn't a big deal. But the sticker price on a skid steer represents a substantially greater investment – one that is often cost-prohibitive to smaller businesses when made on a regular basis. So when comparing models, it's best to look to the future, both in terms of your projected needs down the line as well as the technological enhancements that may be able to better address those needs.

Rental houses and businesses typically value different features when comparing skid steers. When purchasing machines for rent, a company or dealer may place a premium on features

that facilitate maintenance and resist wear and tear to increase the resale value. These aspects also ensure the machines are out for rent, not in the shop for repairs. But when individuals like landscaping companies and contractors compare skid steers, they're often looking more towards the machine's productivity.

Interestingly, the combination of these two needs seems to be coming together, represented in the following three trends:

- 1. Radio remote control Ideal for large open spaces, radio remote control allows an operator to stand outside the loader and complete a variety of tasks with a handheld control. Bobcat is currently one of the only manufacturers to offer this feature. While the convenience aspect is obvious, this technology also cuts down on the cost of each job by enabling a single operator to perform tasks that typically require two people (an operator and a spotter). It's also frequently incorporated into specific applications that may be unsafe for a ride-along operator, including military uses, demolition, firefighting, mining, and chemical plants. Plus, the kit attaches via a harness to the rear window of the skid steer and can be removed and installed onto any other compatible vehicle within your fleet.
- 2. **Remote monitoring** This development aids in the allocation of machinery across multiple jobsites while ensuring that each skid steer remains up to date on any service or repairs required. Remote monitoring uses a software platform to keep track of each skid steer in your fleet a process known as geo-fencing. Each machine has a built-in GPS locator that tracks its location and sends alerts when it enters or exits an established "fence" area. Providing a live connection into the cab display as well as a real-time view of all settings and performance data, this is also a highly effective way to track operator effectiveness and remotely adjust performance.
- 3. New rather than used From a cost perspective, this is one of the biggest trends in skid steers and other similar-size heavy equipment: a demand for newer machines equipped with the latest ergonomic controls and cab designs. In fact, according to a recent Purchasing.com study that analyzed more than 71,000 equipment requests, the demand for new skid steers is up 5.3% since 2012. For example, consider the newest models from Bobcat, John Deere, and New Holland. They incorporate design enhancements that make them far more maneuverable and cut down on service intervals.

### **Used skid steers**

If the cost of buying or leasing a new skid steer is too high, you may be able to find a used model for less than half the price. While it's crucial to have a professional mechanic evaluate every machine you're considering for purchase, in general, machines that are less than five years old with low operating hours are usually a good investment. As a means of comparison, 5 to 6 hours a day is considered full-time use. So a machine that advertises "low hours" or "part-time use" should ideally have about 12 hours per week or 600 per year since the date of its manufacture.

Also, don't forget to factor in the type of work performed. There's a huge difference in the condition of a skid steer that has been used for manufacturing and one that has been used for construction applications.

And kick the tires - literally. The tires on a skid steer are similar to those on an automobile. The pattern of wear can indicate mechanical adjustments and repairs that may be required. Plus, the tires themselves are somewhat costly, with heavy-duty skid steer tires costing anywhere from \$200 to \$1,200 each. If the tires are



shot, a new set could cost you as much as \$800 to \$5,000. Read more about how to assess a used skid steer loader.

# **Attachments**

Half the fun of owning a skid steer is the multitude of attachments that are compatible with it. In fact, a skid steer loader is one of the most versatile pieces of heavy equipment due in large part to its accessories. This is the main reason so many skid steers are now incorporated into almost every industrial application, from farming to forestry.

Often designed with universal compatibility, the quick-couple feature found on most skid steer attachments allows a single operator to easily switch between tasks in the field, usually in just minutes. This easy transition is what converts a single machine into a plug-n-play fleet of heavy equipment machinery.

When comparing attachments, be on the lookout for the term "quick attach." This indicates that the accessory has been designed with a loader attachment bracket that will allow you to share it with other machines throughout your fleet. This is actually a crucial consideration when evaluating a skid steer accessory for purchase or rent, as some machinery generates too much torque to accommodate the quick change coupler (backhoes are a common example). In cases like this, the manufacturer may recommend additional attachment instructions, in addition to the quick attach, enabling you to still use the accessory but requiring a little extra legwork for each change.

# **Top Skid Steer Attachments**

There are dozens of skid steer attachments available through major manufacturers and smaller third-party sellers. As mentioned above, one of main criteria of a quality skid steer dealer is the

selection of attachments they provide. Some offer the basic 20 items while others can provide as many as 50 different attachments. Whether they're offered for purchase or rent, be on the lookout for the dealer who can provide all the attachments necessary for your current jobsite under a single roof.

Let's look at some of the most popular examples. We've populated the list below based on user requests, both within our network and through individual dealers. From these sources, the top skid steer attachments include:

Attachment	Description	Average Cost
3-Point adapters	Adapter that allows you to operate heavy duty attachments at their maximum flow and pressure.	\$800 to \$2,395
Angle broom	Cylindrically-shaped heavy-duty sweeper that picks up dirt, gravel, leaves and even snow on a variety of wet and dry surfaces.	\$2,000 to \$6,600
Augers	Used to drill clean holes through a variety of materials.	\$1,700 to \$4,200 for the drive and \$900 to \$3,400 for each bit
Backhoes	Converting a skid steer into a backhoe, this smaller version is more compact and maneuverable.	\$2,200 to \$3,000
Concrete dispensers	Mini dump trucks that allow the precise pouring of concrete into narrow sections.	\$2,360 to \$7,000
Grader rake	Quickly grades, rakes, and levels a variety of terrain.	\$4,300 to \$4,900
Grapples	Designed for farming, landscaping, or recycling plants, this jaw-shaped attachment is great for scooping up larger loose materials like brush and cardboard.	\$3,200 to \$9,200
Mowers	Suited to a variety of landscapes and trees or brush with an average diameter of 10 in., mowers are available in numerous sizes and types.	\$2,700 to \$20,000
Multi-purpose or 4- in-1 bucket	Allows the safe, easy transport of large rocks, loose soil, or other debris, designed especially for skid steers.	\$3,300 to \$4,800
Pallet forks	Another conversion tool, this time turning the loader into a fork lift.	\$700 to \$900
Snow blowers and plows	A popular accessory for the maintenance of parking lots and other areas during winter months, snow blowers and plows quickly	\$7,000 to \$13,000 for blowers and \$3,150 to \$5,700 for plows

	remove snow in large areas and tight spaces alike.	
Trenchers	Ideal for farming and construction, skid steer trenchers save countless hours that would otherwise be required to dig a trench manually. Available in a variety of depths and widths.	\$4,700 to \$5,400

# **Specs**

Among skid steers, the most popular models are in the 1,750 lb. to 2,200 lb. range. They provide easy maneuverability and minimal damage to the work environment. While bigger machines exist – extending up to 4,000 lbs. in some cases – any skid steer over 2,200 lbs. is considered a heavy-lift loader.

Now that you're familiar with the attachments, you have to find a machine that will support them and provide the specific capacity to accomplish your job effectively. There are seven main specs to consider, each of which contributes significantly to the cost-effectiveness and output of the machine. These include:

### 1. Power/fuel

While most skid steers are diesel powered, a few gasoline-fueled models do exist. In general, diesel engines are considered more efficient than their gasoline counterparts, especially when greater horsepower is required to run demanding accessories like high flow planers. It's estimated that a diesel engine can be anywhere from 5% to 10% more efficient than a gasoline engine — a huge difference in cost when considering an entire fleet.

Diesel engines often range from 49 hp to 74 hp in a skid steer. In contrast, gasoline engines are commonly in the 24 hp to 27 hp range. The benefit to gasoline is that the emissions tend to be cleaner and they are generally easier to start (the result of a no-choke engine).

### 2. Tires

As mentioned briefly above, tires can represent a significant portion of the investment when it comes to skid steers – often costing as much as \$5,000 for a set of four. But depending on your application and operating environment, there are a few different types to choose from:

Air-filled - Air-filled tires are generally used for exterior applications and feature large
treads that work well on rough or uneven surfaces. The least-costly of the three, the
downside is that, like the tires on your car, they are vulnerable to nails, metal shards,
and other sharp objects. This makes them inefficient for environments where those
objects are frequently present.

- **Foam-filled** In contrast, foam-filled pneumatic tires roll right over sharp objects but come at a higher cost. While they're great for just about any work environment, they are considerably heavier than the air-filled type and tend to wear on the transmission faster, leading to a greater frequency of breakdowns and repairs.
- **Solid rubber** The final option, solid rubber, are extremely thin, making them largely relegated to indoor use or the smooth paved areas of a loading pad. The benefit is that they are much lighter than the other two varieties and never go flat. Unfortunately, comfort suffers as well, as the operator will feel every crack and bump in the road.

### 3. Emissions tier

Heavy equipment manufacturers are required to ensure their internal combustion engines comply with all state and federal emissions regulations established by the U.S. Environmental Protection Agency (EPA). Currently these include EPA Tier 1 through Tier 3, with Tier 4 hydrocarbon (HC) limits currently being phased in through 2015.

These issues of compliance have led to a few noticeable changes with regard to skid steers – in particular, design. The Tier 4 engine includes a diesel particulate filter, larger coolers, and additional components that add to the bulk of the engine. The challenge was to maintain the compact maneuverability of the design that has made the skid steer so popular while still achieving EPA compliance. The solution has been a technology known as exhaust gas recirculation. This after-treatment approach is currently used in engines manufactured by Terex and John Deere and is built into loaders offering outputs of less than 75 hp.

It's worth noting that emissions regulations are stricter for engines providing 75 hp and above than they are for those with less than 75 hp of output – a factor that may contribute to the popularity of the 1,750 lb. to 2,200 lb. range mentioned above.

# Tier 4 Engine Phases

- Tier 4 Interim Initiated in 2011
- Less than 75 hp Initiated in 2013
- Tier 4 Final- Initiated in 2014
- 75 hp to 175 hp Starting in 2015

### 4. Lift path

Every job site is unique. And to accomplish tasks within each effectively, skid steers feature a couple different lift paths to facilitate ease and maneuverability: radius and vertical. Radius lift path offers greater forward reach than its vertical counterpart. In fact, by some estimates, it beats the vertical design in more than 80% of the lift-arm path. This means it offers superior reach at a variety of heights and is ideal for accessing elevated platforms, like a flatbed truck, or dumping over walls.

But the vertical path is not without merit. In situations where you need reach at full lift height, a vertical lift path can provide reliable performance by keeping the load closer to the skid steer.

It's also reportedly better for applications that include heavy items, like pallets of cement or sod.

# 5. Operating capacity

This is often the first thing a dealer will ask you and the first thing you should ask yourself: what environment will the skid steer operate in? More specifically, what are the measurements, both external and internal that it will be expected to navigate? Don't forget to measure all doorways, corridors, gates, garages, and even storage containers. As a general rule, many skid steers range from 3 feet to 6 feet wide, with heights that average between 6 feet and 7 feet.

# 6. Dump height

Similar to lift path, you'll need to know your dump height if you plan on using the bucket attachments to load trucks or any other elevated platform on a construction site or farm. For example, if you need to empty a bucket of gravel into the bed of a truck that stands 5 feet high, you'll need a dump height of at least 7 feet to clear it safely. When comparing loaders, look for the "height to hinge pin." This indicates the pivot point between the arms of the loader and the bucket and ranges between 8 feet to 12 feet.

# 7. Lifting capacity

Another critical spec to pay attention to, lift capacity is also known as "operating capacity" or "operating load" and is the total amount of weight the skid steer can accommodate. Average skid steer lift capacities range from 1,300 lbs. with a 45 hp engine to 2,500 lbs. with an 84 hp engine.

It's worth noting that maneuverability decreases as weight capacity increases, as bigger loads require bigger engines. So if you have a restricted work environment with tight corners or fragile grounds, you may want to consider lower weight capacities.

# **Choosing a Dealer**

Purchasing a skid steer loader represents a major investment as well as an ongoing expense when you factor in maintenance and repairs. Quality dealers realize this and aim to support the purchase before and after the sale. With that in mind, it's crucial to find a dealer that offers specific experience and a few particular services that can save you time and money, both up front and in the years that follow.

As a general rule, a skid steer dealer who's been in business for 10 years or more is a fairly safe bet. The longevity indicates a solid understanding of their customers, the market, and the products they're selling. It has also allowed them ample time to establish a reliable network,

creating beneficial relationships with the manufacturers they represent and the third-party providers that may be called upon to service certain components of your machine.

### **Specialization**

When choosing between similar dealers, give more weight to the one that specializes in skid steers. Many companies will provide a range of earth moving equipment, including full-size wheel loaders, backhoes, and bulldozers. In a setup like this, skid steers may not represent a significant portion of their business and they may not be able to provide the same depth of selection or post-sale service as a dealer that is exclusively dedicated to skid steers.

### **Rent first**

A major benefit of a professional skid steer dealership is that they often rent most if not all of the machines they're selling. A recent study conducted by Purchasing.com shows that the rental option is becoming increasingly popular among businesses of every size and scale for the cost-savings it provides. It's also one of the surest ways to test-drive a particular model and make sure it's suited to your job site.

In addition to the machines themselves, an extensive selection of skid steer attachments for rent is a must.

# **Training and safety**

Unlike a forklift, skid steers do not require the operator to be licensed. As a result, training programs, certifications, and resources vary widely. Major manufacturers often provide some sort of basic training through the web and then occasionally offer supplemental courses for purchase. One prime example is Bobcat. They offer full training courses for both operation and safety, including DVD tutorials and handbooks.

Individual dealers, regardless of the manufacturers they represent may offer additional training, conducted either at their facility or on-site at yours. In warehousing applications and other operations with a high rate of employee turnover, this service provides the knowledge and best practices that boost productivity and safety, making dealer support a valuable component of employee training.

For additional information, OSHA has also created a <u>handbook for skid steer safety</u>.

### Financing

A skid steer can cost anywhere from \$15,000 to \$60,000 (and up) depending on the model selected. For certain businesses and individuals, financing may make more sense for the tax benefits it can provide. It also allows new businesses or those without the available funds or credit to purchase a machine without a down payment.

Some skid steer manufacturers offer financing through dealers. Individual dealers may also partner with a third-party bank or leasing company that can offer favorable terms. But that doesn't mean it's always the best deal. When comparing financing offers, don't forget to

consider those available through your bank – with an established relationship and proven success, you may qualify for a better deal on your own.

# **Local EPA regulations**

How familiar with EPA regulations specific to your area is the dealer you're considering? Heavy machinery with a diesel engine must conform to both state and federal emissions regulations, specifically EPA Tier 1 through Tier 3. These laws are already in effect, with tighter Tier 4 hydrocarbon (HC) limits being phased in through 2015.

Pay attention to the specific aspects of the machine's compliance – especially when purchasing a used skid steer – and have the dealer walk you through it step by step to ensure you're not purchasing a machine that will require costly improvements to achieve EPA compliance. Though there may be exceptions, most professional skid steer dealers can be relied upon to provide machines that are already certified.

# General questions to ask a dealer

What happens if the machine breaks down on a weekend? This is one of a number of important questions to ask the potential skid steer dealers you're comparing. Answers to the questions below can quickly identify the dealer best suited to your business needs:

- 1. What parts do you keep on-site for quick replacement? If I need a part you don't stock, what's the average delivery window?
- 2. How many skid steer technicians do you have?
- 3. How many skid steer technicians do you have?
- 4. Do you service machines on-site?
- 5. What are your service hours? And what happens if a machine needs repairs off-hours?
- 6. What is your average service response time? Do you guarantee a specific time?
- 7. What types of insurance do you carry? (Note: This is important! If a dealer doesn't hold a policy that covers worker's comp and one of their technicians is injured while repairing a loader at your location, the claim could go on your insurance.)

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