

# Tractor Buying Basics



**Your guide to  
choosing and using  
John Deere utility tractors.**



**JOHN DEERE**



# Tractor-buying begins here.



Whether you just moved to your rural retreat, or you're considering taking on a few more chores...if you're reading this book, you've probably decided it's time to think about a new utility tractor. To help give you the information you need to make the best buying decisions, the tractor experts here at John Deere have put together this guidebook.

## The First Steps.

The first step in choosing your utility tractor is deciding on the chores you expect it to handle, both now and in the future; that allows you to narrow your choices down to a particular horsepower range. From there, you and your dealer should consider the size of your property, the comfort and convenience features you'd like and, of course, your budget. A few questions to consider:



- **How much power do you need?** Having a little more power than you think you need is better than not having quite enough.
- **Which transmission fits your skill level?** Utility tractors are available with a variety of transmission types, from automotive-style manual shifters on up.
- **Two-wheel drive or four?** Light-duty mowing may only require two-wheel drive; for heavier chores in rolling ground, MFWD may be the way to go. Four-wheel drive is commonly referred to as 'MFWD,' for mechanical front-wheel drive.
- **Which implements will you need?** There are hundreds of implements and attachments available from your John Deere dealer, from snow-throwers to rotary cutters. Your choice of implements will affect the tractor you need.
- **What are your comfort and convenience requirements?** If you're working in the dead of winter or heat of summer, you'll want a closed, climate-controlled cab. If your chores are more 'fair-weather,' you may only need an open-station model.
- **What about regular maintenance?** A tractor should do chores, not be a chore to own. Consider the frequency, type and ease of scheduled maintenance.



Once you and your dealer answer these questions, you'll be well on your way to selecting the right utility tractor model.







# Power: How much do you need?

One of the quickest ways to measure a tractor's capabilities is by considering its horsepower...too little, and you may not be able to handle all the chores you'd like, while too much power may mean you sacrifice fuel efficiency. As a rule, it's better to have slightly more power than you think you'll need; this allows you to 'grow into' your machine as you become more comfortable with its capabilities, and as your needs change. And while straight horsepower is a good figure to start with, more power doesn't necessarily mean more usability.

## ● Tractor-buying tips.

- Invest in a little more tractor than you think you need. If you buy just the bare minimum horsepower to operate your implements, your machine will be in a constant state of strain.
- The size of your tractor depends a lot on how much time you want to spend doing work. Large tractors can cover ground more quickly than small tractors.

## PTO power is Usable Power.

You'll hear tractor dealers talk about 'PTO horsepower' quite a bit. Stated simply, the PTO, or power take-off, is the rotating shaft at the rear of the tractor. Rotary implements like cutters are powered by the PTO, which is powered by the tractor's engine; therefore, PTO horsepower is a truer indication of a tractor's capabilities than engine power. Generally speaking, a tractor's PTO horsepower will be roughly 15% less than its engine horsepower.

As you're comparing models and manufacturers, make sure you know how the manufacturer measures horsepower; currently, there's no industry standard governing how horsepower is measured. Knowing how the horsepower is figured will allow you to compare 'apples to apples.'

## Utility tractor or garden tractor.

As you get a better idea of what you need from your tractor, you may find that one of the larger lawn and garden tractors will do all your chores. In general, if your primary needs are light mowing or dirt work, a well-equipped garden tractor may fit the bill. Take a look at the chart for a better idea of each type's capabilities.

	Garden Tractor	Utility Tractor
Mowing	■	■
Light Grading	■	■
Hauling	■	■
Brush Cutting		■
Loader Work		■
Tilling	■ (light)	■
Post-hole digging		■







# Shifting gears: Utility tractor transmissions.

The range of available transmissions may also affect which model or series of utility tractor you consider. In many ways, the transmission choices are similar to those available in most automobiles.

## Gear-driven manual transmissions

The standard gear-driven transmission is the most efficient and reliable, and is the most common in utility tractors. However, there are still several types of manual transmissions, including:

**Non-synchronized.** An economical, reliable choice that operates just like a car's manual transmission...stop, clutch, shift, go. These transmission are well suited for mowing, plowing, or other constant-speed jobs.

**Partially synchronized.** Smoother and more flexible, these allow you to clutch and shift without stopping the tractor, and are easier to operate over a wide range of speeds.

**Fully synchronized.** The easiest of the manual-type transmissions, these allow you to shift on the go, without clutching, and typically offer a wider range of working speeds.

## Automatic transmissions

Also called 'hydrostatic' transmissions, these systems function much like the automatic transmission in your car. Typically, an automatic transmission is more expensive, but they're also the most user-friendly.

## PowrReverser for shuttle shifts

If your chores include loader work, consider a John Deere tractor with PowrReverser™. That little orange lever to the left of the steering wheel lets you change direction from forward to reverse, without stopping, clutching or shifting.

## What are all those levers?

Don't let all the levers and numbers intimidate you. On most utility tractors, you'll choose your range (usually identified with letters such as A, B, C) and your speed within that range (1, 2, 3, etc.). Some transmissions are synchronized (meaning you can shift without stopping) between ranges, while some are synchronized between speeds. And if you see a transmission designated, for example, as '9F/3R,' that simply means you have 9 forward speeds and 3 reverse.

### ● Tractor-buying tips.

- If you do much front-loader work, you may want MFWD, or four-wheel drive. If you're just mowing, two-wheel drive may suit your needs.
- While a four-wheel drive tractor will cost more, it's resale value will usually be higher than that of a comparable two-wheel drive model.
- Four-wheel drive is one way to increase your capabilities, without opting for a larger or more powerful tractor.



*When picking a transmission, it's important to think about two things. How often will you change speeds? How many times will I need to shift gears?*







# Lifting, loading, digging: Hydraulics 101.

Don't ignore the hydraulic capacity of any tractor you're considering. The hydraulic system runs everything from the power steering and brakes to loaders, backhoes, and other attachments. Look for a 'GPM' figure, or gallons-per-minute; the higher the number, the greater the hydraulic capacity of the tractor.

Hydraulic systems are also generally available in two types: open-center and closed-center. The important distinction for you to be aware of is this: an open-center system constantly circulates hydraulic fluid, meaning faster response times when you lift the loader or other hydraulic implement. The closed-center system remains in an 'idle' state until it's called on to power an attachment.

## ● Tractor-buying tips.

- Some tractors have a single hydraulic pump that powers both steering and implements. This can cause less steering power when using a hydraulic implement with a heavy load (a full loader bucket, for example).
- Many tractors have a tandem hydraulic pump that provides power to both the steering and implements without one robbing power from the other.

## What are SCVs?

A Selective Control Valve, or SCV, may also be referred to as a 'remote,' or the point at which your implements hydraulic system attaches to the tractor's hydraulic system. Most implements need at least one SCV to lift or lower, fold or adjust; loaders usually require at least two. Many tractors are available with extra SCVs, either at the rear of the machine or in the middle.









# Hook it up: Hitch basics.

You'll probably see references to a tractor's 'three-point hitch.' This hitch consists of the three 'arms' at the rear of the tractor, and serves as the mounting point for many of your implements. The two lower arms, or 'lift arms,' do most of the heavy lifting. The upper arm, or 'top link,' serves to stabilize the implement, while allowing adjustment for the angle of the implement.

## The iMatch™ Advantage

The John Deere-exclusive iMatch hitch takes a lot of the work out of attaching implements. The iMatch hitch system allows you to connect the hitch and PTO shaft to any compatible implement, without leaving the operator's seat. Not every implement is iMatch compatible, so consider implement availability before you opt for the iMatch system.

## Hitch categories

You may also see references to 'Category 1' or 'Category 2' three-point hitches. This is simply a quick reference to the hitch's lifting and pulling capacity. For maximum versatility, a Category 1 or 2 hitch will allow attachment of the most commonly used implements... even those from different manufacturers. Category 0 hitches are primarily used on lawn and garden tractors.

### ● Tractor-buying tips.

- Look for a quick-coupler hitch system. This system lets you quickly attach the implement without having to adjust hitch geometry. The quick hitch works with Category 1 or 2 3-point hitch implements, no matter the brand.
- Ask for a demonstration with or without the quick hitch so you can see for yourself the difference it makes.



### **Category 0 Hitch**

For tractors with up to 20 horsepower.

### **Category 1 Hitch**

For tractors with 20 to 50 horsepower.

### **Category 2 Hitch**

For tractors with 50 to 90 horsepower.







# Comfort matters.



Long days can seem even longer when you aren't comfortable. Make sure you take a test drive with every tractor you're considering. And perform some of the tasks you'll be doing at home.

If you plan on spending hours in your tractor, you'll appreciate all the comfort and convenience features you can get. And the best way to get a feel for a tractor's comfort level is to get in, buckle up, and take a test drive. As you do, consider this:

**Seat comfort.** Is the seat itself comfortable? Is the range of adjustment large enough to suit your needs?

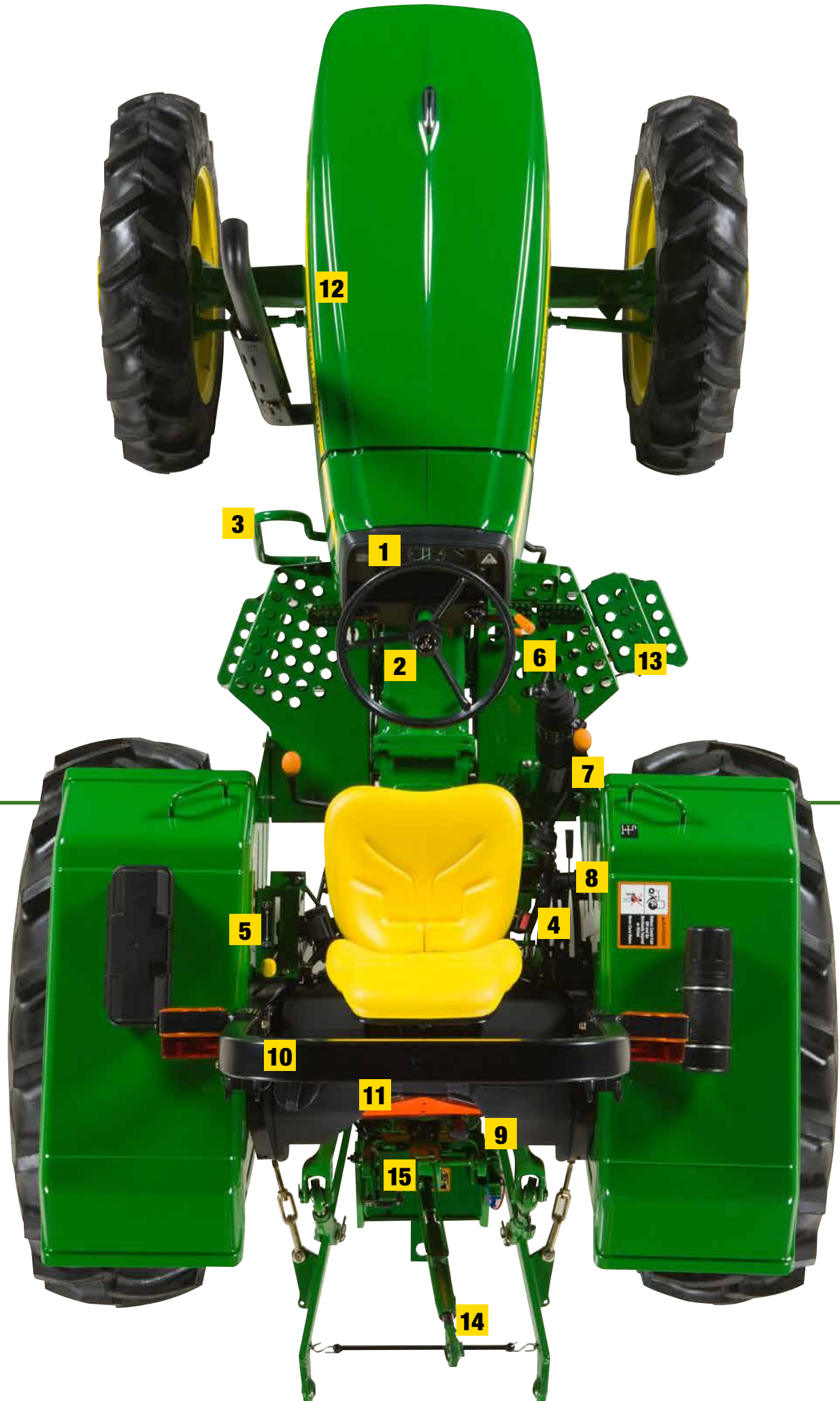
**Controls.** Consider your most commonly used controls. Are they all within easy reach, or do they require awkward reaches? Are the controls out of the way, or will you have to step over a lever just to climb into the seat?

**Operator stations.** There are several types of operator stations to choose from. An enclosed cab, for example, offers the highest level of comfort and convenience, but also commands a higher price. An isolated open station mounts onto the tractor frame with rubber bushings to help reduce noise and vibration. A straddle-mount platform is the most basic, but can require an awkward step when getting on and off the tractor.

**Visibility.** What's the view? It's especially important when you're considering a cab tractor. How's the line of sight to the front tires? Turnaround and look at the view to the drawbar and hitch. Better visibility means more comfort and efficiency—especially after a long day's work.

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|-------------------------------|--|--------------------------|
| <b>1</b> Instrument cluster   | <b>7</b> Gear/range selector                   | <b>12</b> One-piece hood |
| <b>2</b> Steering column      | <b>8</b> SCV controls                          | <b>13</b> Steps          |
| <b>3</b> Handrail             | <b>9</b> Lift arms                             | <b>14</b> Top link       |
| <b>4</b> Hitch lift controls  | <b>10</b> Rollover protection structure (ROPS) | <b>15</b> PTO shaft      |
| <b>5</b> PTO engagement lever | <b>11</b> Slow Moving Vehicle (SMV) placard    |                          |
| <b>6</b> Loader control       |  |                          |





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# Stay safe: A few precautions.

## ● Tractor-buying tips.

- Keep children off the seat and out of work areas. Utility tractors have one seat — the operator's.
- Ask if the tractor has an operator-presence system. This is a switch in the seat that automatically shuts off the engine when the operator is not seated.
- Have the dealer show you the features and controls before you get on.



### Keep your balance.

Lifting something heavy in front? Add ballast (extra weight) to the rear of the tractor to keep the rear tires on the ground. Pulling a heavy implement? Add ballast to the front.



### Get in the zone.

Stay within the ROPS (rollover protection structure) zone. This U-shaped bar over the seat protects you in case of a rollover.



### Buckle up.

Wear your seat belt. The ROPS is ineffective without it.



### See the light.

Turn on the headlights to make sure your tractor is visible when driving in low-light situations.



### Transportation safety.

Always turn on your flashers during road transport.



### Beware the #1 source of accidents.

That's the fast-moving PTO shaft connecting the implement to the tractor. Make sure it's enclosed in a non-rotating shield. Turn off the PTO when inspecting an equipment problem or making repairs. Some tractors have an automatic PTO shut-off if you leave the tractor seat.



### Turn it off.

Turn off the engine and wait for it and all equipment to stop before dismantling the tractor.







# Put your tractor to work.

Once you start looking around at all the attachments available for your utility tractor, you'll be amazed at the number of chores you can do with your new machine.

While you're thinking about attachments, talk with your dealer about everything you'd like your tractor to do, and under what conditions. Start with the number of acres you have to mow, till, or plant. Don't forget to include any future needs that may arise, such as additional acreage. With your dealer, list the implements that can help you get the job done, then consider each implement's horsepower requirements; your choice of tractor will be determined largely by the scope of the duties you expect it to do.

## ● Tractor-buying tips.

■ For more help determining your tractor needs, visit [www.JohnDeere.com](http://www.JohnDeere.com) and use the Utility Tractor Selection Tool.

## What can your tractor do?

On the next couple of pages, we've listed just a few of our most popular implements and attachments. Take a look, and don't hesitate to ask your dealer about any specialized tasks you may have in mind; there's probably a John Deere or Frontier Equipment Implement that can help.



**Move dirt piles, silage, gravel, snow, hay bales, or other materials.** A front-end loader, one of the most popular attachments for utility tractors, can help you handle just about any material moving chore.



**Mow pastures, brush, and roadsides.** Rotary cutters, powered by the tractor's PTO, handle tough cutting and mowing jobs, and are perfect for pastures or other big, open spaces. Most rotary cutters are available in several sizes and duty levels.



**Grade and blade.** Hitch up to a rear blade, and you can level paths or gravel driveways.



**Spread fertilizer.** Put your muck to work with a manure spreader from Frontier Equipment. Available in a variety of sizes, Frontier spreaders help you put nutrients back into the soil.







# Imagine what you can do.



**Dirt or materials work.** If it needs to be smooth as glass, go over it with a box blade, land plane, or other leveling implement to re-grade or fill potholes.



**Save your back.** A posthole digger is a must-have if you're putting up a fence. Powered by the PTO, the auger digs perfect postholes, every time.



**Put up hay.** If you grow and bale hay, a John Deere mower-conditioner cuts and conditions for faster, more even drydown. A John Deere square baler (shown here) lets you put up tight, uniform bales.



**Snow Removal.** If your part of the world turns into a winter wonderland, you'll appreciate having a front- or rear-mounted snow-thrasher or snow sweeper.



**Dig in, dig up.** A backhoe attachment turns your utility tractor into a high-powered digging machine, perfect for planting larger trees and shrubs, or for light-duty construction work.



**Raking and tedding.** After that alfalfa or other forage crop is cut, put it in nice, even windrows with John Deere hay rakes and tedders.







# More of what you need to know.

## ● Tractor-buying tips.

- A tractor's resale value is an important consideration. Purchasing a bottom-dollar tractor now may result in lower resale value down the road.
- Check out the resale values on used tractors to determine which models and brands best retain their value.



### **Maintenance**

Before you buy, make sure you understand what maintenance your tractor will require, and how often. At a minimum, you'll need to know how to check the engine and hydraulic oil levels, how to locate oil and air filters, and how to reach the battery.

### **Cost of ownership**

Don't forget that the cost of owning a tractor is not just the purchase price. Taking care of your tractor ensures a longer operating life and higher resale value. Operating costs include fuel, fluids, repairs and scheduled service, and can run anywhere from \$10 to \$100 per month, depending on the tractor's size and how often it's used. Keep in mind a used or lower quality tractor may have more repair costs.

### **Warranty**

The manufacturer's warranty is a key consideration when purchasing a tractor. Most manufacturers offer a 24-month basic warranty and a 36-month powertrain warranty.

### **The three R's of tires**

A dealer can help you select the best tires for your needs.



**R1** (bar tread) tires provide the best traction, but can cause the most ground damage.



**R3** (turf tread) tires with less aggressive tread are meant for jobs like mowing and have the least traction.



**R4** (industrial-tread) tires have excellent traction, and are softer on turf than R1's. They're often the preferred choice.





JOHN DEERE BMatch



# Why you need the right team behind you.



## Support.

Why buy John Deere? When you purchase a John Deere tractor, you get much more than a proven piece of equipment. John Deere utility tractors are built with the same unparalleled quality and attention to detail that go into our large tractors. Some customers have been buying “green” for generations, and the reason why is that no one builds higher quality, tougher tractors.

## Service.

You value your time and so should your dealer. When you need a part, service or just some advice, you want it right now. John Deere dealers maintain a comprehensive inventory of genuine John Deere parts so you won't be waiting for weeks to get what you need. All service technicians know equipment inside and out and can get you back up and running quickly. And the best part is, they're just a phone call or car ride away when it comes to getting hands-on advice.



## Financing options.

John Deere Financial offers the financial solutions you need when financing or leasing a new tractor:

- Flexible terms
- Flexible down payments
- Competitive fixed- and variable-rate loans and leases
- Flexible payment terms
- Fast approvals

For complete details on financing or leasing your tractor with John Deere Financial, ask your John Deere dealer.

John Deere Financial website USA  
John Deere Financial website Canada

[www.JohnDeereFinancial.com](http://www.JohnDeereFinancial.com)  
[www.JohnDeereFinancial.ca](http://www.JohnDeereFinancial.ca)

**To find a dealer near you, visit [www.JohnDeere.com](http://www.JohnDeere.com) or call 1-800-537-8233.**









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