# Tractor Buying Basics

Your guide to choosing and
using John Deere utility tractors

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# 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.


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LOADER

# 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.

## 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 reports horsepower. Currently, there's no industry standard governing how horsepower is reported, so a straight comparison of figures may not give you the most accurate idea of the tractors' capabilities.

### 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 on how much time you want to spend doing work. Large tractors can cover ground more quickly than small tractors.

## 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.

## 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, its 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, think about these questions. How often will you change speeds, and how many times will you need to shift ranges? And which gears will you use the most?*

## 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; these transmissions require stopping and clutching between gear and/or range changes. Non-synchronized transmissions are well suited for mowing, plowing, or other constant-speed jobs.

**Partially synchronized.** These allow you to clutch and shift between certain speeds and/or ranges without stopping the tractor, and are easier to operate over a wide range of conditions.

**Fully synchronized.** The easiest of the manual-type transmissions, these allow you to clutch, then shift on the go between any speed or range.

## Hydrostatic transmissions

Perfect for newer or less-experienced operators, hydrostatic transmissions (or "HSTs") use hydraulic pressure, not gears, to propel the tractor. Typically, HSTs feature either pedals for forward and reverse, or a forward/reverse lever with pedals for speed and brakes.

## PowrReverser for shuttle shifts

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

## 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.). And if you see a transmission designated, for example, as "9F/3R," that simply means you have 9 forward speeds and 3 reverse.

# 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; while a higher number generally indicates a higher hydraulic capacity, this isn't always the case; a more efficient hydraulic system may require a lower total flow capacity.

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.
- Although "total" gallons per minute is a useful indicator of hydraulic capacity, many manufacturers list "implement" and "steering" flow separately. This gives you a better idea of the hydraulic power available for loader or implement work.

## What are SCVs?

A Selective Control Valve, or SCV, may also be referred to as a "remote," or the point at which your implement's 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.


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# 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.

## Tractor-buying tips

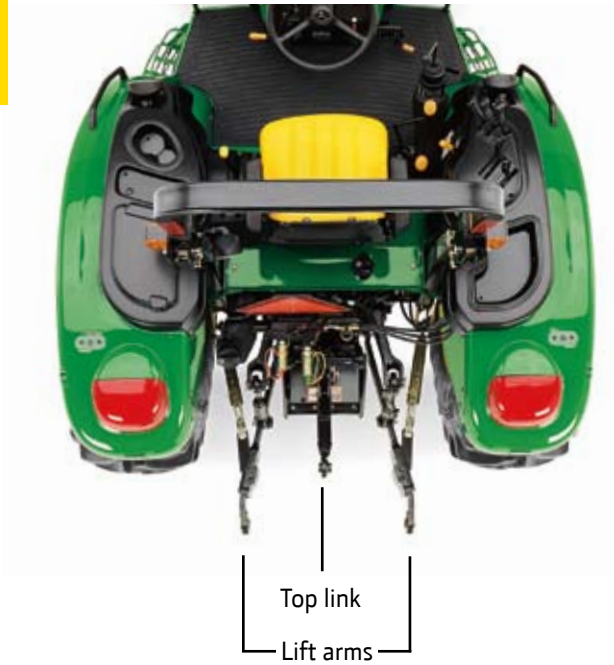
- Look for a quick-coupler hitch system. This system lets you quickly attach the implement without having to adjust hitch geometry. The quick hitch works with Category 1or 2 3-point hitch implements, no matter the brand.
- Ask for a demonstration with and without the quick hitch so you can see for yourself the difference it makes.
- When you're comparing hitch lift capacities, especially between two different manufacturers, make sure you know how that capacity is measured. John Deere measures lift capacity at 24 inches behind the lift point, giving you a much more realistic number.

## The iMatch™ Advantage

The John Deere-exclusive iMatch™ Autohitch™ takes a lot of the work out of attaching implements. The iMatch Autohitch system (available on John Deere compact utility tractors only) allows you to connect the tractor's 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. The quick-coupler, available for most John Deere compact and utility tractors, allows fast attachment of any Category 1 or 2 implement; the PTO shaft must be attached manually.

## 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.




### 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.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EX6

# 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? Make sure you try out the optional John Deere air suspension seat, too.

**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? Turn around and look at the view to the drawbar and hitch. Better visibility means more comfort and efficiency – especially after a long day's work. Also, will you be working after dark? Make sure the tractor you're looking at has sufficient lighting, or is available with auxiliary lighting.

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


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# Stay safe: A few precautions

## Tractor-buying tips

- Keep children off the tractor and out of work areas.
- 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.

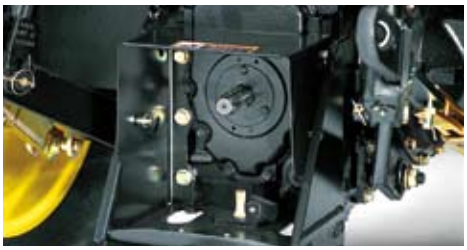
**Keep your balance.**
Lifting something heavy in front? Add ballast (extra weight) to the rear of the tractor to keep the rear tires on the ground. Pulling a heavy implement? Add ballast to the front.

**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 of PTO accidents.**
That's the fast-moving 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.

**Turn it off.**
Turn off the engine and wait for it and all equipment to stop before dismounting 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 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.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# 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-thrower 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 at least a 24-month basic warranty; be sure to ask your dealer about extended warranty plans.

## 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.


JOHN DEERE Rotary

# 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 equipment supplier. 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 Credit 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 Credit, ask your John Deere dealer.

**To find a dealer near you, visit www.JohnDeere.com or call 1-800-537-8233.**


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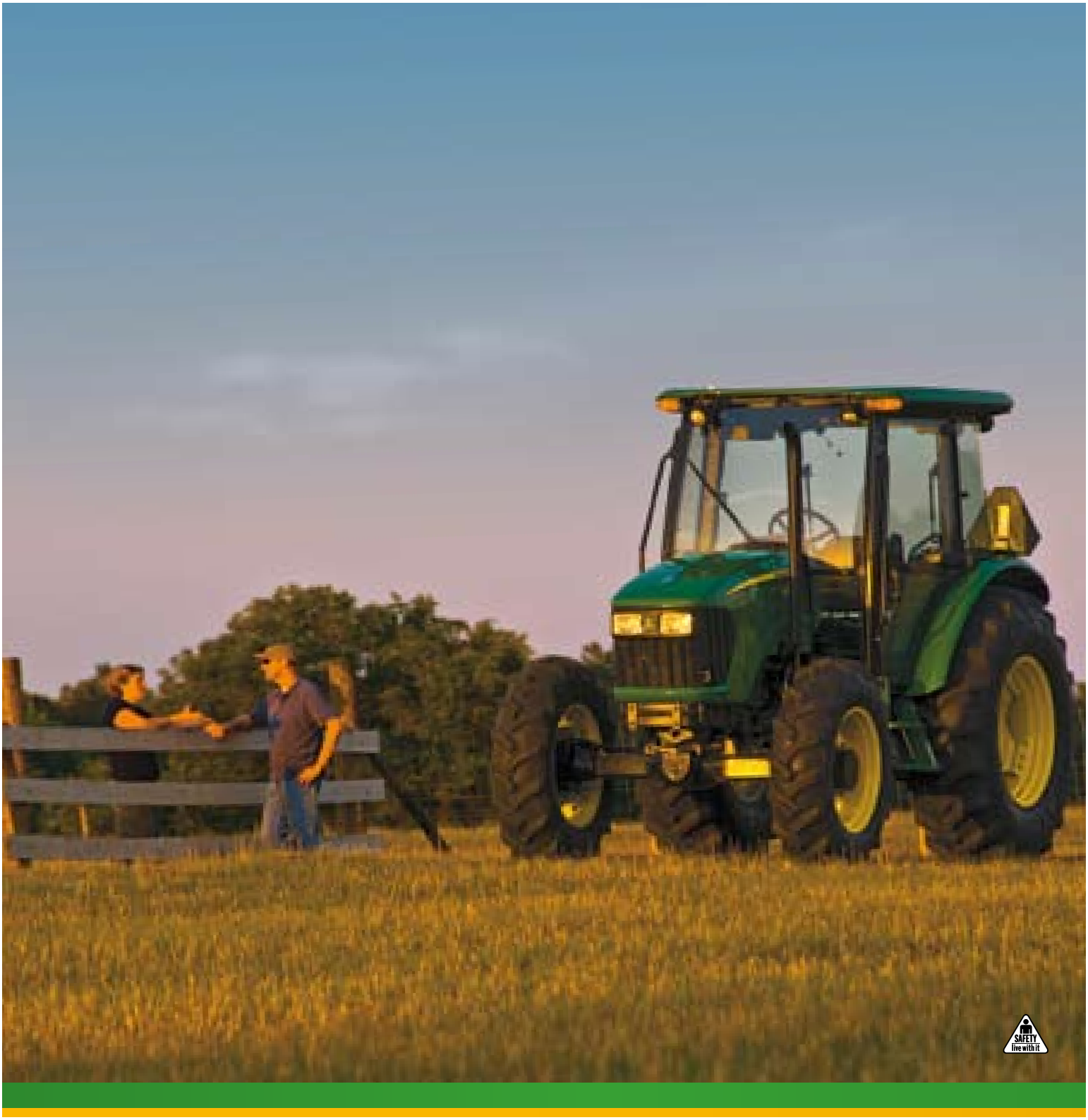


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