

# New Holland Bidirectional™ Tractor 105 PTO hp

TV6070

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You're looking at the world's  
most versatile tractor

**The productivity of the TV6070 Bidirectional™ tractor is limited only by  
your imagination.**





Without question, the New Holland TV6070 Bidirectional™ tractor is the most productive and versatile 105-PTO horsepower tractor you can buy. The Bidirectional lets you mount and power implements on either end to get the best combination of visibility, traction and weight balance. You can push and pull implements to finish one job in half the time. The unique Turnabout™ console allows the seat, steering wheel, dashboard and controls to pivot 210 degrees as a unit, so you can face your work. No matter which direction you travel, you

get an infinite selection of speeds thanks to the hydrostatic drive system. You're as productive going cab-end forward as you are going engine-end forward.

#### **Better maneuverability**

The Bidirectional is unique in its class in yet another way. It articulates up to 45 degrees so you turn sharper and more accurately for reduced crop damage at the end of the rows and better maneuverability with a loader in tight places. You get best-in-class turning at all track settings. The TV6070 wheelbase is also longer than conventional tractors for a better ride and more operator comfort.

#### **Superior traction**

There's more. The Bidirectional keeps you working when other tractors can't. Four equal-size tires and full-time four-wheel drive give the TV6070 superior traction in wet, icy or muddy conditions.

Slippage is minimized, resulting in more effective horsepower use and less tire wear.

#### **Differential lock provides more pull in tough spots**

A differential lock on the cab-end axle locks both wheels together to pull through rough spots. Optional engine-end differential lock provides traction at all four wheels. Both are electro-hydraulically controlled with rocker switches on the right-hand console.

#### **Double your PTO productivity**

You can equip your Bidirectional tractor with two PTOs for unlimited flexibility when doing PTO work. A two-speed 540 and 1000 rpm PTO shaft is standard at the cab end. A two-speed 540 and 1000 rpm shaft is a factory- or dealer-installed option at the engine end.

#### **Choose your tire package**

The TV6070 can be factory-equipped with seven different bias or radial tire packages. Among the options are non-directional tires. With these tires, the lugs are always facing forward, so they perform equally well, no matter what direction you're driving. The tread pattern has a high center contact area for excellent ride and handling. Multiple interlocking lugs provide increased traction edges.

Read on and learn more about the versatility of the TV6070. Then imagine the many jobs the Bidirectional can handle to improve your productivity. Your New Holland dealer is eager to show you the Bidirectional in person. It's a test drive you won't forget.



# This tractor is far from ordinary. It's a versatile Tool Carrier.

## Unique features make the Bidirectional™ more productive.

The New Holland Bidirectional is definitely not your typical tractor. It does everything you expect of a tractor ... and much, much more. Here's a closer look at

some of the features that make the Bidirectional tractor extraordinary.



*Note: some photos show prior Bidirectional tractor models.*





*You get double-duty with the Bidirectional™ tractor. A PTO, three-point hitch, and drawbar at each end let you push and pull implements at the same time, doubling your productivity.*



*True four-wheel drive with four equal-size tires provides superior traction in wet, icy or muddy conditions.*



*Articulated steering lets you make sharp turns and maneuver in tight areas a typical tractor can't. If one end of the tractor fits, the other end will, too.*





# All-day comfort and control

## Outstanding visibility and easy-to-reach controls make work a pleasure.

The work environment in the Bidirectional™ tractor is like no other. New Holland engineered unique features into this roomy control center for your comfort and convenience.

### An outstanding view in any direction

When you step into the Bidirectional cab, you can't help noticing all the glass—61 square feet to be exact. Visibility is excellent no matter which direction you face. There's no stretching or straining to see your work. You'll be especially

impressed by the view facing the “cab end.” While operating a loader, hay header, or other implement, your view is exceptional. No other tractor can match it.

### Turnabout™ console provides the ultimate in control

The Bidirectional tractor's Turnabout™ console rotates to let you face the direction that's best for the job. Just move the seat toward the steering wheel and lift the console rotation lever. The entire opera-



tor area—air ride seat, steering wheel, instruments and controls—rotates 210 degrees. All hand controls are within natural, easy reach,



and remain that way regardless of which direction you're facing. Whether the console is facing the cab end or the engine end, it can be offset 15 degrees as a single unit for added comfort when looking back. And, since the cab has two doors, you can enter or exit the cab from either side, depending on the position of the Turnabout console.

### Monitor your status at a glance

The TV6070 features sophisticated instrumentation to keep you

informed at a glance. The state-of-the-art electronic instrument cluster (EIC) is standard equipment and is easy to use and adapt to your applications. The control pad at the lower right allows you to select which functions to view on the central electronic monitor—engine rpm, ground speed, PTO speed, battery voltage or service intervals. The electronic monitor also displays fuel level, coolant temperature, transmission range and the position of the three-point hitch(es). The transmission range indicator is in the lower left corner of the EIC. Using the control pad, you may also view engine hours, trip hours, service intervals, elapsed time and selected PTO speed. All the

information you need is at your fingertips. A warning light bar around the top of the dashboard includes indicators for all critical functions. For added protection, an automatic shut-down function stops the tractor if a critical malfunction occurs.

### Turn night into day

If you put in hours after dark, the four work lights on the cab end and four work lights on the engine end provide excellent visibility. For even more visibility, add the high-intensity discharge (HID) work lights. Wipers on both windshields help you see what you're doing in all weather conditions.



*Excellent visibility from the cab - you can see straight down to the task at hand.*



*Too hot or cold? The overhead heat and air conditioning controls are easy to reach.*



# Responsive power and smooth direction changes



## Outstanding power with less fuel and lower emissions.

You encounter tough conditions every day, and the TV6070 tractor engine is up to the challenge. The turbocharged, six-cylinder engine provides dependable, quiet power day in and day out. When terrain, soil or crop conditions get really tough, this engine responds with ample torque reserve.

### Reliable design

This time-proven engine features a durable, computer-designed, parent-bore cylinder block for extended life. The contoured block design features a contoured outer surface for increased structural strength. Air-to-air intercooling improves performance. A reversing engine cooling fan option keeps the grill screen clear of dust or chaff.

### Fuel-efficient and B100 approved

The 411-cubic-inch engine features a mechanically governed rotary fuel injection pump and two valves per cylinder that provide simple yet responsive control. Not only does the TV6070 engine meet strict EPA Tier III emission requirements, it's also approved for use with biodiesel blends up to B100 (must meet ASTM 6751 Standards) to reduce emissions and oil imports.

### The perfect speed in either direction

As you've probably figured out by now, "forward" and "reverse" are irrelevant concepts when you work with a Bidirectional™ tractor. Case in point: the unique TV6070 drive train. This electronically controlled hydrostatic drive system efficiently transfers

power to the ground and gives you equal and unlimited variation of speed in either direction.

### Select from eight ranges

The hydrostatic drive system has eight ranges that you select by pressing the "bump" switch on the right-hand console. Range shifting can be done on the go, allowing you to react quickly to changing working conditions. If you encounter a steep hill or heavy resistance, the transmission automatically downshifts to pull you through, then returns to your selected range when conditions return to normal.

### Infinitely variable speed...no clutch needed

Direction and speed are controlled by one handy control. Push it for-





ward and you move forward. The further you push, the faster you go. Pull it back and the tractor slows gradually and shifts into neutral, then reverse. No clutch needed. It's the best shuttle shifting you'll find, which makes the TV6070 ideal for loader work.

#### Built-in braking action

The hydrostatic system provides

dynamic braking through the drivetrain. Simply pull the forward-neutral-reverse control slowly toward the neutral position to smoothly stop the tractor. The tractor foot brake may be used as required for additional stopping power. Pressing the foot pedal on either end of the cab activates a hydraulically-actuated wet disc brake system.

#### Ideal creeper transmission

For applications requiring extremely slow speeds, the TV6070 provides infinite slow speed offerings superior to those offered by competitive brand creeper transmissions.

<b>Range 1</b>	0 to 6.7 mph	Provides ample power for light draft work and is excellent for loader work.
<b>Range 2</b>	0 to 7.7 mph	
<b>Range 3</b>	0 to 8.3 mph	
<b>Range 4</b>	0 to 9.1 mph	Ideal for most PTO work. Infinite hydrostatic speeds allow ground speed to be perfectly matched to changing crop conditions.
<b>Range 5</b>	0 to 10.3 mph	
<b>Range 6</b>	0 to 11.6 mph	
<b>Range 7</b>	0 to 16.2 mph	Transport range. Hydrostatic drive allows travel speeds to be easily adjusted for changing road conditions.
<b>Range 8</b>	0 to 19.5 mph	



*One control lets you change speed and direction. No need to clutch or search for the right gear.*

# More hydraulic performance

## Ample flow provides instant response at every turn.

When it comes to hydraulic power, the TV6070 gives you more ... more flow, more remotes and more value. The specially designed closed-center, load-sensing (CCLS) hydraulic system supplies 29.5 gallons per minute (gpm) for fast implement response.

### Optional second system

A second independent auxiliary hydraulic system with 35 gpm can be added for continuous flow applications requiring a combination of high flow and high pressure. Standard in-cab electronic flow control changes the speed of the implement on the go.

### Up to five remotes

Three CCLS remote valves are standard at the cab end, with two additional remotes available at the

engine end for a total of five factory-installed remotes. In-cab flow-control knobs are standard equipment for the cab-end circuits. Color coding (green, tan and blue) of the flow controls, the engagement levers on the right-hand console and the couplers make it easy to keep track of hydraulic operations. The green and tan circuits are linked to foot pedal controls for applications such as the front-end loader. A foot pedal is optional for the blue circuit.

### Up to 8700-lb. lift capacity

The TV6070 handles large implements ... and more of them. The standard Category II three-point hitch at the cab end of the tractor has a lift capacity of 6,560 pounds. The addition of a second auxiliary lift cylinder increases the lift capacity to 8700 pounds. Standard flexible link ends

make implement hookup fast and easy. Telescoping stabilizers control the sway of the lower links while working, and during transport. For more versatility, add a second three-point hitch to the engine-end. This three-point hitch can lift up to 4,000 pounds. A position display on the electronic instrument cluster shows you the positions of both hitches.



*Flow control for all three cab-end remotes is provided inside the cab for your convenience.*





# Hassle-free maintenance

## Flip-up hood provides complete access to the engine.

Servicing your Bidirectional™ tractor is a hassle-free experience. You can check or add engine oil without raising the hood and without the interference of a loader. For complete access to the engine, the hood lifts up and out of the way...no tools needed and no bulky side panels to remove. Just pull the release cable and lift the handle. With the hood fully raised, you can easily reach all components of the engine and cooling system. Filters are easy to check and replace. Sight gauges for hydraulic oil and clear reservoirs for coolant and brake fluid make level checks especially easy.



*The high-capacity 55-gallon (total capacity) fuel tanks are located in front of the cab steps and can be reached conveniently from the ground and filled from either side.*



*Coolant level is easy to check.*



*The engine air filter is accessible from ground level. Easy, spin-off wing nuts make cleaning or replacement a breeze.*



*The oil dipstick and fill port can be reached without lifting the hood.*



*Pull this lever and the entire hood flips up for complete engine access.*





# The Bidirectional™ is the ultimate loader tractor

## Two loaders are available to match your requirements.

The Bidirectional™ tractor is ideal for loader work. Think about it...the TV6070 provides infinite speeds, better turning and easier shuttling than any other tractor. And, the loader is attached to the cab end of the tractor, so you enjoy a number of advantages over conventional tractors. You get a more direct view to the bucket cutting edge because the tractor hood isn't in the way. The loader frame is wider, providing more strength and stability. Hydraulic hoses are shorter and fit better since they don't have to be routed around the length of the tractor. Another plus: the loader doesn't interfere with regular maintenance of

the tractor. There's no reason to raise it, reach through it or reach over it to perform daily maintenance or provide periodic maintenance, because it is mounted on the cab end.

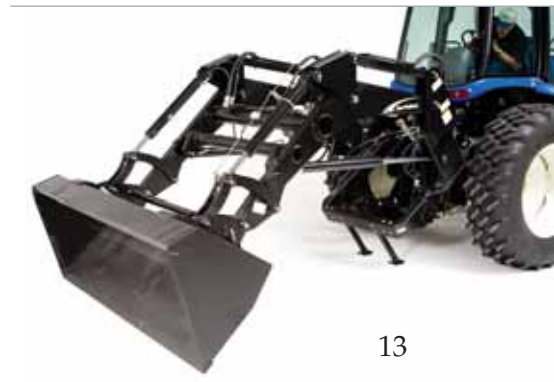
### Two choices

You can select from two loader models for the TV6070 Bidirectional tractor. Choose the 84LB loader for the highest reach. With a maximum lift height over 13 feet, it's easy to position bales and pallets precisely. For maximum maneuverability, choose the high-performance 82LB loader. It provides a shorter

overall length with increased lift capacity to make it easy to maneuver with loads inside pens and corrals or through gates and doorways. The Quick-Attach loader design allows you to quickly attach or remove either loader model, and quickly move to other jobs as needed.







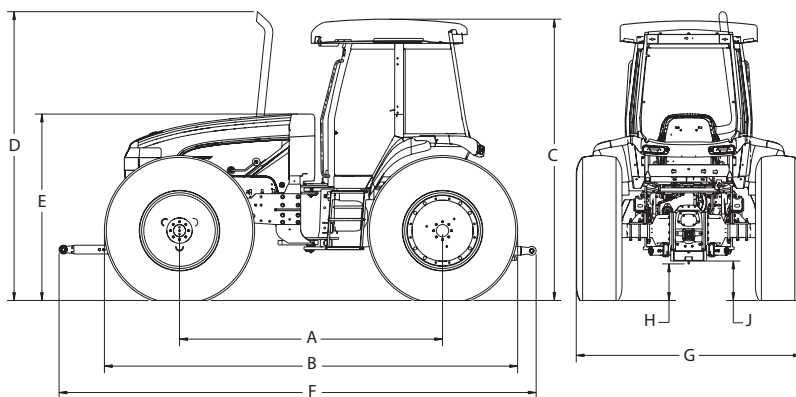
# Specifications

MODEL	TV6070
Rated PTO power, HP (kw)	105 (78)
<b>Engine</b>	
Make/model	FPT
Type	6-cylinder parent bore diesel
Fuel Injection	Bosch mechanical pump, direct injection
Bare engine power, HP (kw)	155 (116)
Rated speed, RPM	2,200
Idle speed, RPM	850-950
Displacement, cu. in. (L)	6 / 411 (6 / 6.7)
Aspiration	Turbocharged/air-air intercooled
Air cleaner	Dual element dry with aspirated spin tube precleaner
Cold start aids	Grid heater/coolant block heater
Bio diesel compatibility	Up to 100%
<b>Electrical</b>	
Type	12v negative ground
Batteries	Two group 31 low maintenance
Cold start rating, each, CCA	950
Alternator, amps	120
<b>Transmission</b>	
Type	Multi-range closed-loop hydrostatic
Pump	Variable displacement, mechanical operator control
Motor	Electronically controlled 8-range variable displacement
Ground speeds in ranges, MPH (KPH)	
1	0 to 6.7 (10.8)
2	0 to 7.7 (12.4)
3	0 to 8.3 (13.4)
4	0 to 9.1 (14.6)
5	0 to 10.3 (16.6)
6	0 to 11.6 (18.7)
7	0 to 16.2 (26.0)
8	0 to 19.5 (31.4)
Braking	Dynamic braking by moving lever to neutral position
<b>Axles and Brakes</b>	
Axle type	HD flange with inboard planetary reduction
Differential lock, cab end	Standard
Differential lock, engine end	Optional
Oscillation, degrees	10
Brake type	Wet disc in cab-end axle, hydraulic actuation
Total brake area, in. <sup>2</sup> (cm <sup>2</sup> )	507 (3271)
Parking brake	Cable actuation of service brakes
<b>PTO Systems</b>	
Type	Mechanical 540/1000 RPM
Shafts	Interchangeable 1 3/8" diameter
Locations:	
cab end	Standard
engine end	Optional
Engagement	Electro-hydraulic

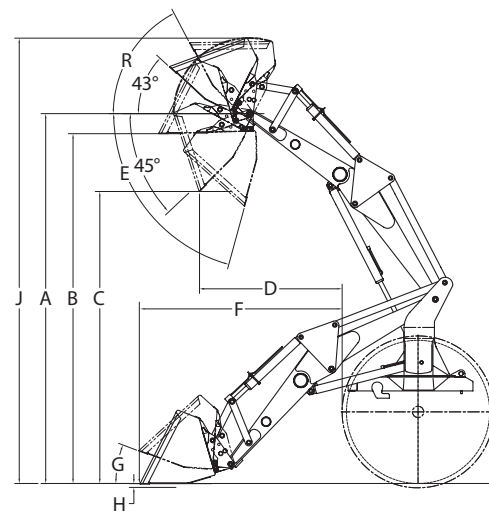
MODEL	TV6070
<b>Hydraulic Systems</b>	
Standard system-type	
Type	CCLS with piston pump
Total flow @ 2200 engine RPM, GPM (LPM)	29.5 (111)
Pressure compensator, PSI (Bar)	3,000 (207)
Remote valves-standard cab end	3
In-cab flow controls	3
Valve actuation	Hand levers, foot pedals
Remote valves-optional engine end	2
Valve actuation	Hand levers
Couplers	1/2" ISO, 2 for each valve
Optional auxiliary hydraulics	
Type	CCLS with piston pump; electronic flow control
Maximum flow	
@ 2200 engine RPM, GPM (LPM)	35 (133)
Pressure compensator, PSI (Bar)	4350 (300)
Couplers	3/4" ISO, with 1/2" case drain
<b>3-Point Hitches</b>	
Type	Category II, flex link ends and sway links
Controls	Electronic position control, auto and manual modes
Standard cab end	
Lift capacity @ 24" behind links, lbs. (kg)	6,500 (2950)
Optional cab end	
Lift capacity @ 24" behind links, lbs. (kg)	8,700 (3950)
Optional engine end	
Lift capacity @ 24" behind links, lbs. (kg)	4,000 (1800)
<b>Steering</b>	
Type	Hydrostatic power
Articulation angle	45 degrees maximum
Curb clearance circle ft. in. (m)	32' 10" (10.0)
<b>Cab</b>	
Type	2-Door ROPS/FOPS
Tinted safety glass, area, ft <sup>2</sup> (m <sup>2</sup> )	61 (5.67)
Climate control	Pressurizer, heater/defroster, air conditioning
Fan	3-speed
Seat	Air suspension, 7 comfort adjustments
Turnabout™ console	210 degree rotation to face either driving direction
<b>Drawbars</b>	
Type	3-position adjustable, swinging
Cab end	Standard
Engine end	Optional
<b>Refill Capacities</b>	
Fuel tanks, gal. (L)	55 (208)
Engine oil, gal. (L)	5 (19)
Engine coolant, gal. (L)	7.25 (27)
Hydraulic system/rear axle, gal. (L)	13.5 (51)
Front axle, gal. (L)	6.5 (25)



KEY TV6070 DIMENSIONS*		
A	Wheelbase, in. (mm)	118.1 (3000)
B	Length over tires, in. (mm)	183.9 (4670)
C	Overall length, in. (mm)	214.2 (5440)
D	Exhaust stack height, in. (mm)	125.6 (3190)
E	Hood height, in. (mm)	81.1 (2060)
F	Cab height, in. (mm)	123.2 (3130)
G	Width over tires, in. (mm)	99.6 (2530)
H	Clearance to drawbar pin, in. (mm)	14.3 (362)
J	Clearance to drawbar hanger, in. (mm)	14.8 (376)



KEY	LOADER DIMENSIONS	82LB*	84LB*
A	Maximum lift height to Pivot Pin, in. (mm)	143.8 (3652)	157.8 (4008)
B	Maximum lift height under level bucket, in. (mm)	135.4 (3439)	148.8 (3780)
C	Clearance with bucket dumped, 45 degree, in. (mm)	110.3 (2802)	123.8 (3144)
D	Reach (from tire), max lift height, bucket 45 degree, in. (mm)	41.7 (1059)	61.7 (1567)
E	Maximum dump angle	60°	75°
F	Reach with bucket on ground, in. (mm)	90 (2285)	122 (3105)
G	Maximum rollback angle	28°	20°
H	Digging depth, in. (mm)	3.2 (81.2)	4.2 (106.6)
J	Maximum bucket height (standard bucket), in. (mm)	176.1 (4470)	190.1 (4830)
R	Rollback angle at full height	40°	62°
	Lift capacity to max height at pivot, lbs.	6,400	6,150
	Lift capacity to max height 31.5 in. ahead of pivot, lbs.	4,050	4,400
	Bucket rollback force at ground 31.5 in. ahead of pivot, lbs.	6,440	12,000



\*Values assuming GoodYear Versa Torque 480/85R34 tires and 1.5 cu.yd. bucket



# Value, Service and Solutions

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Safety begins with a thorough understanding of the equipment. Always make sure you and your operators read the Operator's Manual before using the equipment. Pay close attention to all safety and operating decals and never operate machinery without all shields, protective devices and structures in place.

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