644 P

Wheel Loader

JOHN DEERE

ELEVATE YOUR EXPECTATIONS

AVS ON THE G5 DISPLAY

SMARTDETECT ON THE G5 DISPLAY

VISION AND DETECTION SYSTEM OFFERINGS

Active jobsites present many operational challenges, including multiple machines, crew members, and bystanders. The John Deere Advanced Vision System (AVS) and SmartDetect™ can help enhance operator awareness to confidently navigate busy work areas:

– Optional **AVS** includes two digital cameras mounted on the rearview-mirror platforms that integrate with the rearview (backup) camera for a single display on a dedicated in-cab monitor.

– Paired with a high-resolution camera and a dedicated display, optional **Advanced Rear Object-Detection System (ARODS)** utilizes a radar system that provides audible alerts when objects are detected at the rear of the machine. ARODS helps operators visualize the loader's reversal path based on its articulation.

– Now available as an easily installed field kit, optional **SmartDetect** alerts operators of objects entering the machine's projected travel path, emitting sound and visual alerts inside the cab as well as an audible alarm to detected bystanders. SmartDetect requires AVS, ARODS, and a G5 display as well as software activation.

ABOVE AND BEYOND

MEET THE P-TIER WHEEL LOADERS

SMARTWEIGH™ PAYLOAD-WEIGHING SOLUTION IS DEERE DESIGNED & SUPPORTED

When your material-handling application needs a heavy-duty lift, add a P-Tier Wheel Loader to your lineup. Combining convenient front-end features with near-parallel lift, spacious operator stations including customizable ergonomic electrohydraulic (EH) controls, streamlined electrical and hydraulic routing, and innovative options, these versatile and productive mid-size models are designed to help you take your operation to the next level.

Take control

Operators can easily control up to six functions without letting go of the ergonomically designed joystick. Two industry-exclusive multifunction buttons can each be programmed to handle any of up to 10 functions selected through the monitor, including bucket vibrate and EH Precision mode.

On your side

All daily service points including fuel refill are conveniently grouped at ground level on the left side of the machine for easy access. Routing of electrical wire harnesses and hydraulic hoses has been streamlined.

Level up

AutoLevel enables near-perfect parallelism throughout the boom-raise-and-lower cycle, letting operators set their desired attachment angle to within ± two degrees.

At the forefront

Featuring bucket and linkage designs that improve load leveling, material retention, and visibility, P-Tier Loaders yield more productivity and performance than previous models. Enhanced-performance buckets with integrated spill guards, curved side cutters, and impressive rollback deliver elevated bucket-fill performance and material retention compared to earlier offerings.

Material matters

SmartWeigh option features dynamic weighing technology that allows operators to weigh without interrupting workflow and removes the need to lower and reraise the boom after tipoff. Shared through the onboard monitor, SmartWeigh is easy to calibrate and effortlessly integrates with the John Deere Operations Center™ so you can track and visualize payload data from almost anywhere. Available as a factory-installed or field-kit option, you can also try SmartWeigh at a low cost for 250 machine hours.

644 P

WHEEL LOADER

2 INDUSTRY-EXCLUSIVE
MULTIFUNCTION BUTTONS

GET AHEAD

MOVING FORWARD.

Designed to elevate your productivity, the 644 P-Tier Wheel Loader helps you put your best foot forward.

Have a seat

Spacious and comfortable cab features extra legroom, an improved HVAC system, additional storage, and a more adjustable seat than earlier models.

Near-parallel lift

Lift path on Z-Bar linkage is near parallel. Better load-leveling capability compared to K-Series models minimizes load rollback, reduces material spillage, and requires fewer manual adjustments. Cross-tube and boom geometry of the Z-Bar linkage has been streamlined to provide a better view to the front attachment.

Stick a fork on it

Available in 60- and 72-inch lengths, improved shaft-style forks enable better visibility to the fork tips compared to previous models.

Clear advantage

Improved visibility to the work tool helps reduce spillage as well as cycle and tool-changeover times. It also helps minimize machine damage when working on crowded jobsites or up against walls.

Connected machines

John Deere construction equipment comes with in-base connectivity — free from subscriptions or annual renewals. Analyze critical machine data, track utilization, review diagnostic alerts, and more from **the John Deere Operations Center.** The Operations Center also enables **John Deere Connected Support™,** which uses data from thousands of connected machines to proactively address issues before they arise. With your approval, your dealer can also remotely monitor machine health, diagnose problems, and even update machine software without a trip to the jobsite.*

*Availability varies by region and product. Options not available in every country.

644 P-TIER WHEEL LOADER SPECIFICATIONS

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

Engine	**644 P-TIER Z-BAR / HIGH-LIFT**		
Manufacturer and Model	John Deere PowerTech™ PSS 6068	Gross Peak Torque (ISO 9249)	1100 Nm (811 lb.-ft.) at 1,400 rpm
Non-Road Emission Standard	EPA Final Tier 4/EU Stage V	Net Torque Rise	58%
Cylinders	6	Fuel System (electronically controlled)	High-pressure common rail
Valves Per Cylinder	4	Lubrication	Full-flow spin-on filter and integral cooler
Displacement	6.8 L (415 cu. in.)	Aspiration	Series turbocharged, charge air cooled
Net Peak Power (ISO 9249)	186 kW (249 hp) at 1,800 rpm	Air Cleaner	Under-hood, dual-element dry type, restriction indicator in cab monitor for service
Gross Peak Power (ISO 9249)	194 kW (260 hp) at 1,800 rpm		
Net Peak Torque (ISO 9249)	1061 Nm (783 lb.-ft.) at 1,400 rpm		

Cooling	
Fan Drive	Hydraulically driven, proportionally controlled, fan aft of coolers

Electrical	
Electrical System	24 volt with 100-amp alternator (140-amp alternator optional)
Batteries (2 – 12 volt)	950 CCA (each)

Transmission System				
Type	Countershaft-type PowerShift™			
Torque Converter	Single stage, single phase			
Motor/Generator	N/A			
Inverter	N/A			
Shift Control	Electronically modulated, adaptive, load and speed dependent			
Operator Interface	Steering-column or joystick-mounted F-N-R and gear-select lever; Quick-Shift button on hydraulic lever			
Shift Modes	Manual/auto (1st–D or 2nd–D); Quick-Shift button with 2 selectable modes: kick-down or kick-up/down; and 4 clutch cutoff settings			
	Standard 5-Speed With Lockup Torque Converter		*Optional 4-Speed*	
Maximum Travel Speeds (with 23.5 R 25 tires)	*Forward*	*Reverse*	*Forward*	*Reverse*
Range 1	7.1 km/h (4.4 mph)	7.5 km/h (4.7 mph)	7.2 km/h (4.5 mph)	7.6 km/h (4.7 mph)
Range 2	12.1 km/h (7.5 mph)	12.8 km/h (8.0 mph)	11.9 km/h (7.4 mph)	12.5 km/h (7.8 mph)
Range 3	20.5 km/h (12.7 mph)	26.1 km/h (16.2 mph)	22.9 km/h (14.2 mph)	24.0 km/h (14.9 mph)
Range 4	24.7 km/h (15.3 mph)	N/A	35.2 km/h (21.9 mph)	N/A
Range 5	40.0 km/h (24.9 mph)	N/A	N/A	N/A

Axles/Brakes	
Final Drives	Heavy-duty inboard-mounted planetary
Differentials	Hydraulic locking front with conventional rear – standard; dual locking front and rear – optional
Rear Axle Oscillation, Stop to Stop (with 23.5 R 25 tires)	26 deg. (13 deg. each direction)
Brakes (conform to ISO 3450)	
Service	Hydraulically actuated, inboard sun-shaft mounted, oil cooled, self adjusting, single disc
Parking	Automatic spring applied, hydraulically released, driveline mounted, oil cooled, multi disc

Tires/Wheels ***(see page 9 for complete tire adjustments)***		
	Tread Width	*Width Over Tires*
Michelin 23.5 R 25, 1 Star L-3	2170 mm (85.4 in.)	2875 mm (113.2 in.)

Serviceability			
Refill Capacities		**Refill Capacities** ***(continued)***	
Fuel Tank (with lockable cap)	350 L (92.6 gal.)	Transmission Reservoir With Vertical Filter	23 L (24.3 qt.)
Diesel Exhaust Fluid (DEF)	18.5 L (19.5 qt.)		
Cooling System	44 L (47 qt.)	Axle Oil (front and rear, each)	22 L (23 qt.)
Inverter	N/A	Hydraulic Reservoir and Filter	105.2 L (27.8 gal.)
Engine Oil With Vertical Spin-On Filter	27 L (28.5 qt.)	Park Brake Oil (wet disc)	0.65 L (22 oz.)

Hydraulic System/Steering	
Pump (loader and steering)	Variable-displacement, axial-piston pump; closed-center, pressure-compensating system
Maximum Rated Flow at 6895 kPa (1,000 psi) and 2,250 rpm	310 L/m (82 gpm)
System Relief Pressure (loader and steering)	25 166 kPa (3,650 psi)
Loader Controls	2-function valve; joystick control or fingertip controls; hydraulic-function enable/disable; optional 3rd- and 4th-function valve with auxiliary lever
Steering (conforms to ISO 5010)	
Type	Power, fully hydraulic
Articulation Angle	80-deg. arc (40 deg. each direction)
Turning Radius (measured to centerline of outside tire)	5.64 m (18 ft. 6 in.)

644 P-TIER WHEEL LOADER SPECIFICATIONS

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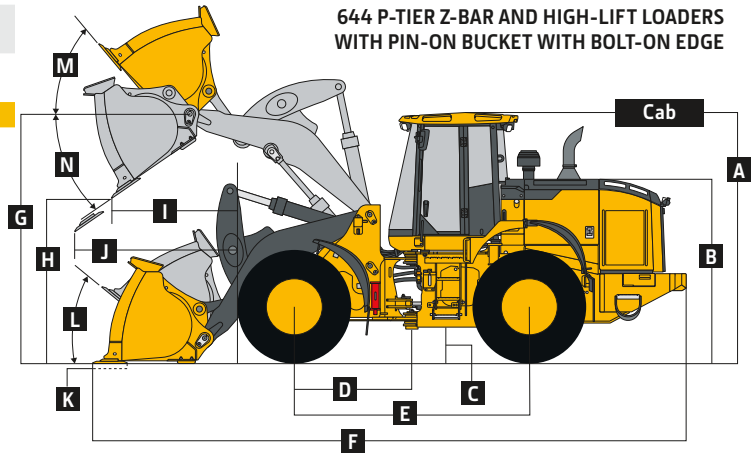
Hydraulic System/Steering *(continued)*	**644 P-TIER Z-BAR / HIGH-LIFT**	
Hydraulic Cycle Times	*Z-Bar*	*High-Lift*
Raise	5.3 sec.	5.3 sec.
Dump	1.4 sec.	1.4 sec.
Lower (power down)	3.8 sec.	4.0 sec.
Total	10.5 sec.	10.7 sec.
Bucket Capacity Range		
Bucket Type		
Pin-On	3.2–3.6 m^3 (4.25–4.75 cu. yd.)	
Coupler	3.1–3.6 m^3 (4.0–4.75 cu. yd.)	
Dimensions and Specifications With Pin-On Bucket With Bolt-On Edge		

644 P-TIER Z-BAR AND HIGH-LIFT LOADERS WITH PIN-ON BUCKET WITH BOLT-ON EDGE



	Z-Bar	*Z-Bar*	*High-Lift*
Dimensions With Bucket With Bolt-On Edge *(illustration above right)*	*3.2-m^3 (4.25 cu. yd.) enhanced performance*	*3.4-m^3 (4.5 cu. yd.) enhanced performance*	*3.2-m^3 (4.25 cu. yd.) enhanced performance*
A Height to Top of Cab	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
B Hood Height	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)
C Ground Clearance	386 mm (15.2 in.)	386 mm (15.2 in.)	386 mm (15.2 in.)
D Length From Centerline to Front Axle	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)
E Wheelbase	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)
F Overall Length, Bucket on Ground	8.33 m (27 ft. 4 in.)	8.38 m (27 ft. 6 in.)	8.72 m (28 ft. 7 in.)
G Height to Hinge Pin, Fully Raised	4.09 m (13 ft. 5 in.)	4.09 m (13 ft. 5 in.)	4.50 m (14 ft. 9 in.)
H Dump Clearance, 45 deg., Full Height	2.87 m (9 ft. 5 in.)	2.83 m (9 ft. 4 in.)	3.28 m (10 ft. 9 in.)
I Reach, 45-deg. Dump, Full Height	1.06 m (3 ft. 6 in.)	1.09 m (3 ft. 7 in.)	1.17 m (3 ft. 10 in.)
J Reach, 45-deg. Dump, 2.13-m (7 ft. 0 in.) Clearance	1.61 m (5 ft. 3 in.)	1.62 m (5 ft. 4 in.)	2.02 m (6 ft. 8 in.)
K Maximum Digging Depth	125 mm (5 in.)	129 mm (5 in.)	262 mm (10 in.)
L Maximum Rollback at Ground Level	45 deg.	45 deg.	45 deg.
M Maximum Rollback, Boom Fully Raised	59 deg.	59 deg.	60 deg.
N Maximum Bucket Dump Angle, Fully Raised	48 deg.	48 deg.	45 deg.
Loader Clearance Circle, Bucket Carry Position	13.0 m (42 ft. 8 in.)	13.0 m (42 ft. 9 in.)	13.3 m (43 ft. 9 in.)
Specifications With Bucket With Bolt-On Edge			
Capacity, Heaped	3.3 m^3 (4.25 cu. yd.)	3.4 m^3 (4.50 cu. yd.)	3.3 m^3 (4.26 cu. yd.)
Capacity, Struck	2.7 m^3 (3.47 cu. yd.)	2.8 m^3 (3.68 cu. yd.)	2.7 m^3 (3.48 cu. yd.)
Bucket Weight With Bolt-On Cutting Edge	1844 kg (4,066 lb.)	1880 kg (4,145 lb.)	1695 kg (3,737 lb.)
Bucket Width	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)
Breakout Force	15 574 kg (34,334 lb.)	15 002 kg (33,074 lb.)	15 568 kg (34,321 lb.)
Tipping Load, Straight, No Tire Deflection	15 005 kg (33,079 lb.)	14 891 kg (32,829 lb.)	12 413 kg (27,367 lb.)
Tipping Load, Straight, With Tire Deflection	14 067 kg (31,012 lb.)	13 956 kg (30,768 lb.)	11 718 kg (25,834 lb.)
Tipping Load, 40-deg. Full Turn, No Tire Deflection	12 987 kg (28,631 lb.)	12 882 kg (28,401 lb.)	10 677 kg (23,540 lb.)
Tipping Load, 40-deg. Full Turn, With Tire Deflection	11 826 kg (26,072 lb.)	11 721 kg (25,840 lb.)	9795 kg (21,594 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load, No Tire Deflection (conforms to ISO 14397-1)*	6493 kg (14,315 lb.)	6441 kg (14,200 lb.)	5339 kg (11,770 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load, With Tire Deflection (conforms to ISO 14397-1)*	5913 kg (13,036 lb.)	5861 kg (12,920 lb.)	4898 kg (10,797 lb.)
Operating Weight	18 709 kg (41,246 lb.)	18 744 kg (41,324 lb.)	18 894 kg (41,653 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PSS 6068 (EPA Final Tier 4/EU Stage V) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

**Rated operating capacity based on Deere attachments only.*

644 P-TIER

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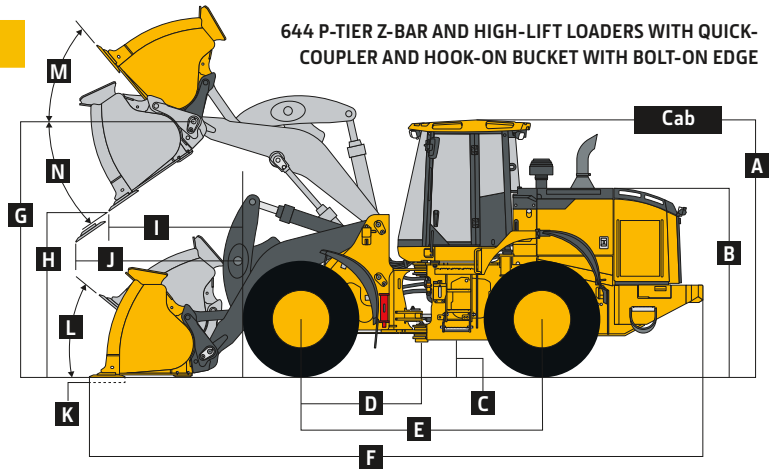
Dimensions and Specifications With Hi-Vis Coupler and Hook-On Bucket With Bolt-On Edge	644 P-TIER Z-BAR / HIGH-LIFT

644 P-TIER Z-BAR AND HIGH-LIFT LOADERS WITH QUICK-COUPLER AND HOOK-ON BUCKET WITH BOLT-ON EDGE



		Z-Bar	*Z-Bar*	*High-Lift*	*High-Lift*
	Dimensions With Bucket With Bolt-On Edge ***(illustration above right)***	*3.1-m³ (4.0 cu. yd.) enhanced performance*	*3.2-m³ (4.25 cu.yd.) enhanced performance*	*3.1-m³ (4.0 cu. yd.) enhanced performance*	*3.2-m³ (4.25 cu. yd.) enhanced performance*
A	Height to Top of Cab	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
B	Hood Height	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)
C	Ground Clearance	386 mm (15.2 in.)	386 mm (15.2 in.)	386 mm (15.2 in.)	386 mm (15.2 in.)
D	Length From Centerline to Front Axle	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)
E	Wheelbase	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)
F	Overall Length, Bucket on Ground	8.38 m (27 ft. 6 in.)	8.43 m (27 ft. 8 in.)	8.77 m (28 ft. 9 in.)	8.82 m (28 ft. 11 in.)
G	Height to Hinge Pin, Fully Raised	4.09 m (13 ft. 5 in.)	4.09 m (13 ft. 5 in.)	4.50 m (14 ft. 9 in.)	4.50 m (14 ft. 9 in.)
H	Dump Clearance, 45 deg., Full Height	2.84 m (9 ft. 4 in.)	2.81 m (9 ft. 2 in.)	3.25 m (10 ft. 8 in.)	3.22 m (10 ft. 7 in.)
I	Reach, 45-deg. Dump, Full Height	1.10 m (3 ft. 7 in.)	1.13 m (3 ft. 8 in.)	1.21 m (4 ft. 0 in.)	1.24 m (4 ft. 1 in.)
J	Reach, 45-deg. Dump, 2.13-m (7 ft. 0 in.) Clearance	1.63 m (5 ft. 4 in.)	1.64 m (5 ft. 5 in.)	2.05 m (6 ft. 9 in.)	2.06 m (6 ft. 9 in.)
K	Maximum Digging Depth	125 mm (5 in.)	129 mm (5 in.)	262 mm (10 in.)	266 mm (10 in.)
L	Maximum Rollback at Ground Level	45 deg.	45 deg.	45 deg.	45 deg.
M	Maximum Rollback, Boom Fully Raised	59 deg.	59 deg.	60 deg.	60 deg.
N	Maximum Bucket Dump Angle, Fully Raised	48 deg.	48 deg.	45 deg.	45 deg.
	Loader Clearance Circle, Bucket Carry Position	13.0 m (42 ft. 9 in.)	13.0 m (42 ft. 9 in.)	13.5 m (44 ft. 3 in.)	13.5 m (44 ft. 4 in.)
	Specifications With Bucket With Bolt-On Edge				
	Capacity, Heaped	3.30 m³ (4.25 cu. yd.)	3.40 m³ (4.50 cu. yd.)	3.07 m³ (4.02 cu. yd.)	3.26 m³ (4.26 cu. yd.)
	Capacity, Struck	2.70 m³ (3.47 cu. yd.)	2.80 m³ (3.68 cu. yd.)	2.51 m³ (3.28 cu. yd.)	2.66 m³ (3.48 cu. yd.)
	Bucket Weight With Bolt-On Cutting Edge	1844 kg (4,066 lb.)	1880 kg (4,145 lb.)	1639 kg (3,613 lb.)	1695 kg (3,737 lb.)
	Bucket Width	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)
	Breakout Force	14 907 kg (32,865 lb.)	14 419 kg (31,789 lb.)	13 987 kg (30,385 lb.)	13 569 kg (29,914 lb.)
	Tipping Load, Straight, No Tire Deflection	14 246 kg (31,407 lb.)	14 141 kg (31,174 lb.)	11 431 kg (25,202 lb.)	11 381 kg (25,091 lb.)
	Tipping Load, Straight, With Tire Deflection	13 347 kg (29,425 lb.)	13 242 kg (29,194 lb.)	10 770 kg (23,744 lb.)	10 719 kg (23,631 lb.)
	Tipping Load, 40-deg. Full Turn, No Tire Deflection	12 279 kg (27,071 lb.)	12 181 kg (26,854 lb.)	9764 kg (21,526 lb.)	9718 kg (21,426 lb.)
	Tipping Load, 40-deg. Full Turn, With Tire Deflection	11 163 kg (24,610 lb.)	11 061 kg (24,385 lb.)	8919 kg (19,663 lb.)	8871 kg (19,557 lb.)
	Rated Operating Load, 50% Full-Turn Tipping Load, No Tire Deflection (conforms to ISO 14397-1)*	6140 kg (13,536 lb.)	6090 kg (13,427 lb.)	4882 kg (10,763 lb.)	4859 kg (10,713 lb.)
	Rated Operating Load, 50% Full-Turn Tipping Load, With Tire Deflection (conforms to ISO 14397-1)*	5582 kg (12,305 lb.)	5531 kg (12,193 lb.)	4460 kg (9,832 lb.)	4436 kg (9,779 lb.)
	Operating Weight	19 134 kg (42,182 lb.)	19 190 kg (42,307 lb.)	19 449 kg (42,877 lb.)	19 465 kg (42,913 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PSS 6068 (EPA Final Tier 4/EU Stage V) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

**Rated operating capacity based on Deere attachments only.*

Dimensions and Specifications With Hi-Vis Coupler and Construction Forks

		Z-Bar	*Z-Bar*	*High-Lift*	*High-Lift*
	Dimensions With Forks ***(illustration at top of next page)***	*1.52-m (60 in.) tine length*	*1.83-m (72 in.) tine length*	*1.52-m (60 in.) tine length*	*1.83-m (72 in.) tine length*
A	Height to Top of Cab	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
B	Hood Height	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)	2.51 m (8 ft. 3 in.)
C	Ground Clearance	386 mm (15.2 in.)	386 mm (15.2 in.)	386 mm (15.2 in.)	386 mm (15.2 in.)
D	Length From Centerline to Front Axle	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)	1.66 m (5 ft. 5 in.)
E	Wheelbase	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)	3.31 m (10 ft. 10 in.)
F	Overall Length, Forks on Ground	9.01 m (29 ft. 7 in.)	9.32 m (30 ft. 7 in.)	9.41 m (30 ft. 10 in.)	9.71 m (31 ft. 10 in.)
G	Height to Hinge Pin, Fully Raised	4.09 m (13 ft. 5 in.)	4.09 m (13 ft. 5 in.)	4.50 m (14 ft. 9 in.)	4.50 m (14 ft. 9 in.)
H	Reach, Fully Raised	820 mm (32 in.)	820 mm (32 in.)	930 mm (3 ft. 1 in.)	930 mm (3 ft. 1 in.)
I	Fork Height, Fully Raised	3.78 m (12 ft. 5 in.)	3.78 m (12 ft. 5 in.)	4.19 m (13 ft. 9 in.)	4.19 m (13 ft. 9 in.)
J	Maximum Reach, Fork Level	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	2.05 m (6 ft. 9 in.)	2.05 m (6 ft. 9 in.)
K	Fork Height, Maximum Reach	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	1.74 m (5 ft. 9 in.)	1.74 m (5 ft. 9 in.)
L	Reach, Ground Level	1.16 m (3 ft. 10 in.)	1.16 m (3 ft. 10 in.)	1.56 m (5 ft. 1 in.)	1.56 m (5 ft. 1 in.)
M	Depth Below Ground	90 mm (3 in.)	90 mm (3 in.)	220 mm (9 in.)	220 mm (9 in.)
N	Tine Length	1.52 m (60 in.)	1.83 m (72 in.)	1.52 m (60 in.)	1.83 m (72 in.)
O	Load Position, 50% Tine Length	760 mm (30 in.)	910 mm (36 in.)	760 mm (30 in.)	910 mm (36 in.)

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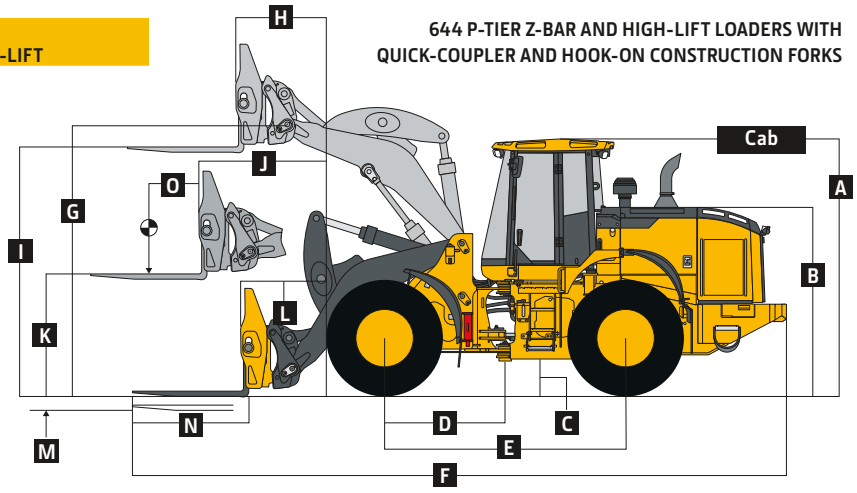
Dimensions and Specifications With Hi-Vis Coupler and Construction Forks *(continued)*

644 P-TIER Z-BAR / HIGH-LIFT

644 P-TIER Z-BAR AND HIGH-LIFT LOADERS WITH QUICK-COUPLER AND HOOK-ON CONSTRUCTION FORKS



	Z-Bar	*Z-Bar*	*High-Lift*	*High-Lift*
Specifications With Forks *(illustration above right)*				
Tipping Load, Straight, No Tire Deflection	9950 kg (21,935 lb.)	9436 kg (20,803 lb.)	8637 kg (19,042 lb.)	8220 kg (18,121 lb.)
Tipping Load, Straight, With Tire Deflection	9666 kg (21,310 lb.)	9171 kg (20,219 lb.)	8394 kg (18,506 lb.)	7989 kg (17,613 lb.)
Tipping Load, 40-deg. Full Turn, No Tire Deflection	8610 kg (18,981 lb.)	8156 kg (17,981 lb.)	7429 kg (16,379 lb.)	7060 kg (15,565 lb.)
Tipping Load, 40-deg. Full Turn, With Tire Deflection	8232 kg (18,148 lb.)	7803 kg (17,203 lb.)	7092 kg (15,635 lb.)	6744 kg (14,868 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load, With Tire Deflection (conforms to ISO 14397-1 and SAE J1197)*	4116 kg (9,074 lb.)	3902 kg (8,601 lb.)	3546 kg (7,818 lb.)	3372 kg (7,434 lb.)
Rated Operating Load, Rough Terrain, 60% Full-Turn Tipping Load, With Tire Deflection (conforms to EN474-3)*	4939 kg (10,889 lb.)	4682 kg (10,322 lb.)	4255 kg (9,381 lb.)	4046 kg (8,921 lb.)
Rated Operating Load, Firm and Level Ground, 80% Full-Turn Tipping Load, With Tire Deflection (conforms to EN474-3)*	6586 kg (14,519 lb.)	6242 kg (13,762 lb.)	5674 kg (12,508 lb.)	5395 kg (1,894 lb.)
Operating Weight	18 603 kg (41,011 lb.)	18 663 kg (41,144 lb.)	18 787 kg (41,419 lb.)	18 847 kg (41,552 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PSS 6068 (EPA Final Tier 4/EU Stage V) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

**Rated operating capacity based on Deere attachments only.*

Adjustments to Operating Weights and Tipping Loads With Buckets

Adjustments to operating weights, tipping loads, and tires are based on Z-Bar machine with pin-on 3.2-m³ (4.25 cu. yd.) enhanced-performance bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator*

Add (+) or deduct (–) kg (lb.) as indicated for loaders with 3-piece rims	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 40-deg. Full Turn*	*Tread Width*	*Width Over Tires*	*Vertical Height*
Standard Z-Bar With Torque Converter Transmission	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	N/A	N/A	N/A
Michelin 23.5 R 25, 1 Star L-3	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Bridgestone 23.5 R 25, 1 Star L-3	+101 kg (+223 lb.)	+771 kg (+170 lb.)	+68 kg (+150 lb.)	–3 mm (–0.1 in.)	+15 mm (+0.6 in.)	+39 mm (+1.5 in.)
Titan 23.5-25, 20 PR L-3	–271 kg (–597 lb.)	–207 kg (–456 lb.)	–183 kg (–402 lb.)	–3 mm (–0.1 in.)	+33 mm (+1.3 in.)	+29 mm (+1.1 in.)
Titan 725/70-25 16-Ply L-4T (Logger Style)†§	+359 kg (+792 lb.)	+285 kg (+629 lb.)	+252 kg (+555 lb.)	+34 mm (+1.4 in.)	+119 mm (+4.7 in.)	+78 mm (+3.1 in.)
Michelin 750/65 R 25, 1 Star L-3T†§	+715 kg (+1,577 lb.)	+557 kg (+1,228 lb.)	+492 kg (+1,084 lb.)	+34 mm (+1.4 in.)	+140 mm (+5.5 in.)	+42 mm (+1.7 in.)

**May change based on vehicle configuration, weight, or tire-pressure adjustments.*

†Equipped with 5-piece heavy-duty rims.

§$CaCl_2$ not recommended.

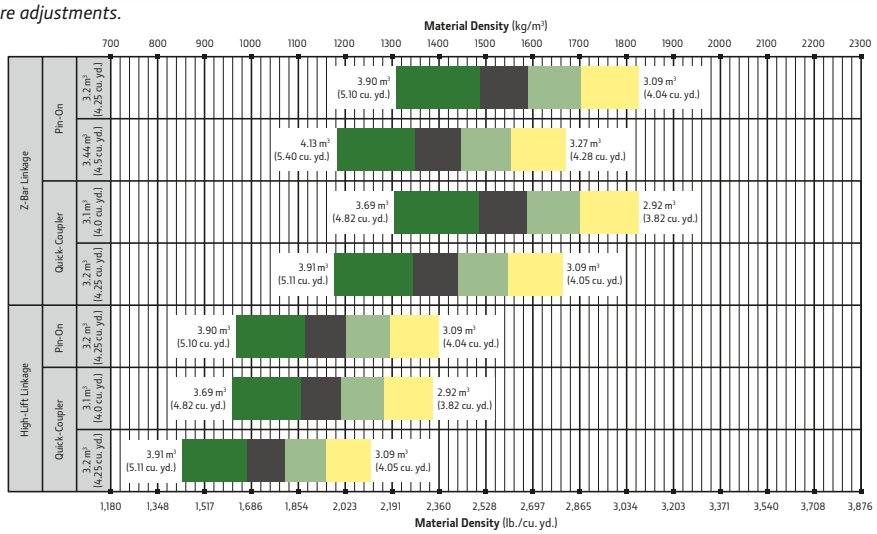
§Requires 9-deg. rear axle stops.

Bucket Selection Guides

LOOSE MATERIALS	kg/m³	lb./cu. yd.	LOOSE MATERIALS	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486	Limestone, coarse, sized	1570	2,646
Cinders (coal, ashes, clinkers)	673	1,134	Limestone, mixed sizes	1682	2,835
Clay and gravel, dry	1602	2,700	Limestone, pulverized or crushed	1362	2,295
Clay, compact, solid	1746	2,943	Sand, damp	2083	3,510
Clay, dry in lump loose	1009	1,701	Sand, dry	1762	2,970
Clay, excavated in water	1282	2,160	Sand, voids, full of water	2083	3,510
Coal, anthracite, broken, loose	865	1,458	Sandstone, quarried	1314	2,214
Coal, bituminous, moderately wet	801	1,350	Shale, broken crushed	1362	2,295
Earth, common loam, dry	1218	2,052	Slag, furnace granulated	1955	3,294
Earth, mud, packed	1843	3,105	Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Granite, broken	1538	2,592	Stone or gravel, 18.75-mm (0.75") size	1602	2,700
Gypsum	2275	3,834			

Bucket Fill Factors

115% 110% 105% 100% 95%



Additional equipment

Key: ● Standard ▲ Optional or special — See your John Deere dealer for further information.

644 P	Engine
●	Wet-sleeve cylinder liners
●	Programmable auto-idle and auto shutdown
●	Selected idle adjustment from 900–1,250 rpm
●	Starter excessive-cranking protection
●	Automatic engine cool-down timer
●	Automatic derating for exceeded system temperatures
●	Serpentine drive belt for automatic tensioner
●	Electrical fuel-priming pump
●	Dual-stage fuel filter and water separator
●	500-hour vertical spin-on oil filter
▲	Engine-compartment light
▲	Chrome exhaust stack
●	Automatic glow plugs for cold start
▲	Engine-block heater (recommended for cold starts below –23 deg. C [–10 deg. F])
▲	Centrifugal engine air pre-cleaner
▲	Throttle lock
	Powertrain
●	Clutch cutoff with 4 operator settings: Automatic, level ground, small slope, or steep slope
●	Programmable maximum high gear
●	Clutch calibration engaged from monitor
●	2,000-hour vertical spin-on transmission filter
●	Transmission fill tube and sight gauge
●	Transmission diagnostic ports
▲	4-speed transmission with non-lockup torque converter
●	5-speed transmission with lockup torque converter
●	Front locking differential
▲	Rear locking differential
●	Brake retractors and adjusters
▲	Automatic differential lock
●	Axle oil temperature sensing
▲	Wheel-spin control
	Quad-Cool™ Cooling System
●	Heavy-duty, trash-resistant radiator and high-ambient cooling package

644 P	Quad-Cool Cooling System *(continued)*
●	2-side access to all coolers
●	Isolated from engine compartment
●	Engine radiator
●	Engine oil cooler
●	Hydraulic oil cooler (oil to air)
●	Transmission oil cooler (oil to air)
●	Charge air cooler (air to air)
●	Fuel cooler
●	Coolant recovery tank
●	Antifreeze, –37 deg. C (–34 deg. F)
●	Cool-on-demand, hydraulically driven, swing-out fan
●	Enclosed fan safety guard
▲	Automatic reversing fan drive
●	Axle and service-brake coolers
	Hydraulics
●	Electrohydraulic (EH) controls with soft stops and adjustable settings
●	In-cab adjustable automatic return-to-dig bucket positioner
●	In-cab adjustable automatic boom-height kickout/return to carry
●	Reservoir with sight gauge and fill strainer
●	Hydraulic diagnostic ports
●	4,000-hour in-tank filter
●	2 function — joystick with F-N-R
▲	2 function — 2-lever fingertip controls and steering column F-N-R
▲	3 function — joystick with F-N-R and integrated 3rd-function roller
▲	3 function — 3-lever fingertip controls and steering column F-N-R
▲	4 function — joystick with F-N-R and integrated 3rd/4th-function rollers
●	Programmable multifunction buttons (2)
●	Adjustable and continuous hydraulic-flow settings
●	Programmable attachment settings
▲	Ride control, automatic with monitor-adjustable speed settings
▲	Hydraulic control system for quick-coupler locking pins
▲	Hydrau™ XR cold-temperature hydraulic fluid recommended below –25 deg. C (–13 deg. F)

644 P	Steering Systems
●	Conventional steering wheel with spinner knob
▲	Joystick steering (including conventional steering column) with gearshift, F-N-R, and horn
▲	Secondary steering
	Electrical
●	Solid-state electrical power-distribution system
●	Lockable master electrical-disconnect switch
●	Battery-terminal safety covers
●	By-pass start safety cover at starter
●	Remote jump-start access in battery box
●	Pre-wired for beacon/strobe light
●	Lights: Halogen driving lights with guards (2) / Front (4), rear cab (2), and rear grille (2) work lights / LED front turn signals and flashers / LED stop- and taillights
▲	Premium LED light package (all exterior lights are heavy-duty LED)
●	Programmable courtesy lights
●	Horn, electric
●	Reverse warning alarm
●	Multifunction/multi-language 178-mm (7 in.) LCD color monitor includes: Digital instruments — Analog display (hydraulic oil temperature, engine coolant temperature, transmission oil temperature, and engine oil pressure) / Digital display (engine rpm, transmission gear/direction indicator, hour meter, fuel level, diesel exhaust fluid (DEF) level, speedometer, odometer, and average fuel consumption)
▲	Multifunction/multi-language 127-mm (5 in.) LCD color monitor includes: Digital instruments — Analog display (hydraulic oil temperature, engine coolant temperature, transmission oil temperature, and engine oil pressure) / Digital display (engine rpm, transmission gear/direction indicator, hour meter, fuel level, DEF level, speedometer, odometer, and average fuel consumption)
●	Integrated cycle counter with 5 categories

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions per ISO 9249. No derating is required up to 3050-m (10,000 ft.) altitude. Specifications and design subject to change without notice. Specifications with the exception of bucket capacity are in accordance with all applicable ISO standards. Except where otherwise noted, these specifications are based on a unit with applicable linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator.

Additional equipment *(cont.)*

Key: ● Standard ▲ Optional or special — See your John Deere dealer for further information.

644 P	Electrical *(continued)*
●	Indicator lights: Standard and selected options / Amber caution and red stop
●	Operator-warning messages
●	Built-in diagnostics: Diagnostic-code details / Sensor values / Calibrations / Individual circuit tester
▲	Electrical corrosion-prevention package
●	Standard AM/FM/Weather-Band (WB) radio with remote auxiliary port
▲	Premium AM/FM/WB radio with Bluetooth®, remote auxiliary port, and remote USB port (premium cab only)
●	24- to 12-volt, 8-amp converter and cab power ports (3)
▲	24- to 12-volt, 15- or 30-amp converter and cab power ports (3)
	Operator's Station
●	Standard cab with air conditioning/heater (ROPS/FOPS Level 1, isolation mounted)
▲	Premium cab with air conditioning/heater (ROPS/FOPS Level 1, isolation mounted)
▲	Automatic temperature control (premium cab only)
●	Rear window defrost vent
●	Keyless start with multiple security modes
●	Sealed-switch module with function indicators
●	Seat with backrest extension, deep foam, fabric cover, and adjustable air suspension
▲	Premium seat with high-wide back- and headrest extension, heated and ventilated, leather/fabric cover, and adjustable heavy-duty air suspension
●	Hydraulic controls integrated to seat
●	High-visibility, bright-orange seat belt, 76 mm (3 in.), with retractor
▲	4-point seat-belt harness
▲	Seat-belt minder monitoring with JDLink™ and seat-belt indicator beacon
●	Cup holder and cup/Thermos® holder with retaining strap
●	Lunch-box/cooler holder with tie-down brackets
●	Coat hook
●	LED dome and reading light

644 P	Operator's Station *(continued)*
●	Rubber floor mat
●	Dual-tilt steering column
●	Operator's manual storage compartment
●	Outside (2) and inside (1) rearview mirrors
▲	Heated outside mirrors with convex lens
▲	In-cab adjustable heated outside mirrors with convex lens (premium cab only)
●	Left-side operator-station access
●	Fall-arrest system anchor points tested to 2268 kg (5,000 lb.) on front of cab
●	Slip-resistant steps and ergonomic handholds
●	Pull-down front sun visor
●	Front and rear intermittent windshield wipers and washers
▲	Powered cab air pre-cleaner
▲	Beacon bracket only
▲	Beacon bracket with strobe beacon
●	Rearview camera
▲	Rearview camera with radar object-detection system
▲	Dedicated 178-mm (7 in.) rear camera display
▲	Advanced Rear Object-Detection System
▲	Advanced Vision System
●	Payload scale ready
▲	SmartWeigh™ ready + trial
▲	SmartWeigh
▲	SmartDetect™
▲	Fire extinguisher
	Loader Linkage
●	Z-Bar loader linkage (parallel lift)
▲	High-Lift Z-Bar loader linkage (parallel lift)
	Buckets and Attachments
▲	Full line of Deere pin-on buckets, coupler buckets, and forks
▲	John Deere hydraulic coupler that accepts JRB-pattern attachments
▲	Hi-Vis hydraulic coupler that accepts Euro-pattern attachments (ISO)
	Overall Vehicle
●	JDLink wireless communication system (available in specific countries; see your dealer for details)

644 P	Overall Vehicle *(continued)*
●	NeverGrease™ rear-axle oscillation
●	Front and rear tie-downs
●	Rear cast bumper/counterweight with rear hitch and locking pin
●	Articulation locking bar
●	Loader boom service locking bar
●	40-deg. steering articulation to each side with rubber-cushion stops on frame
●	Vandal protection with lockable engine enclosures, right counterweight storage, and filler access for radiator/fuel/DEF/ hydraulic transmission
●	Left-side service steps and handholds
▲	Right-side service steps and handrails
▲	Left-side close-mounted steps
●	Storage compartment
●	Fuel-tank fill strainer
●	Heavy-duty fuel-tank guard
●	Ground-level fuel and DEF fill
●	Same-side ground-level daily servicing
●	23.5R25 tires on 3-piece rims
▲	23.5R25 tires on 5-piece rims
▲	Tire-pressure monitoring system
▲	Waste handler (Z-Bar and High-Lift)
●	Environmental drains and sample ports for engine, transmission, hydraulic oils, and engine coolant
▲	Quick fluid service (engine, transmission, hydraulic oils, and engine coolant)
▲	Fast-fuel system
●	Fenders, front narrow
▲	Fenders, front full width
▲	Fenders, front and rear full width
▲	Fenders, front and rear full width with mud flaps
▲	Less wheels and tires with axle stops
▲	Rims less tires
▲	Transmission side-frame and bottom guards
▲	Special guarding for waste applications
▲	Lift eyes
▲	License-plate bracket and light

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