232 – 380 HORSEPOWER

JOHN DEERE

K LOADERS

644K | 724K | 744K | 824K | 844K

PRODUCTION LOADERS

Think. Big.

Serious productivity demands serious thinking. Many of the numerous improvements in the K-Series came from the brightest minds in the industry — loader owners and users such as yourself. Armed with fresh insights from this Customer Advocate Group, we enlarged the cab, redesigned the cooling, enhanced the hydraulics, refined the ergonomics, and offered even more options. All with the goal of increasing productivity and uptime, while lowering daily operating costs. Owners, operators, and maintenance personnel will all benefit from the big ideas found in the 644K, 724K, 744K, 824K, and 844K Loaders. To learn how, turn the page.

K-SERIES KEY SPECIFICATIONS

	644K	724K	744K	824K	844K
Rated Net Horsepower	232 hp	264 hp	304 hp	333 hp	380 hp
Bucket Capacity	4.25 cu. yd.	4.75 cu. yd.	5.25 cu. yd.	6 cu. yd.	7.25 cu. yd.
Z-bar:					
Tipping Load	28,937 lb. 40-degree full turn	31,314 lb. 40-degree full turn	37,750 lb. 40-degree full turn	38,775 lb. 40-degree full turn	44,136 lb. 40-degree full turn
Breakout Force	33,903 lb.	31,742 lb.	42,805 lb.	41,678 lb.	47,860 lb.
Operating Weight	40,036 lb.	42,174 lb.	53,312 lb.	57,783 lb.	70,629 lb.
PowerIlel™ :					
Tipping Load	24,862 lb. 40-degree full turn	N/A	N/A	N/A	N/A
Breakout Force	26,519 lb.	N/A	N/A	N/A	N/A
Operating Weight	43,563 lb.	N/A	N/A	N/A	N/A

John Deere-built Tier 3 emission-certified PowerTech™ diesel engines deliver power without compromise in all conditions.

Torque reserves are impressive, topping out at a whopping 59 percent in the 824K. It's a K-Series advantage that helps maintain good boom and bucket speed in and out of the pile. For heaped loads, even in wet or hard-packed material.

Low center of gravity and optimized fore-and-aft balance deliver impressive stability and full-turn tipping-load capacities.

Unsurpassed powertrain and hydraulic performance helps maintain quick ground speed and boom lift, even on steep ramps. For faster cycles.

Standard equipped with JDLink Ultimate, you have 24/7 anywhere computer access to your loader's location, utilization, dashboard alerts, fuel consumption, diagnostic codes, and hours. Plus geofencing, curfew, and numerous other capabilities.

Available premium high/wide-back heated air-suspension seat adjusts multiple ways for daylong comfort and support.

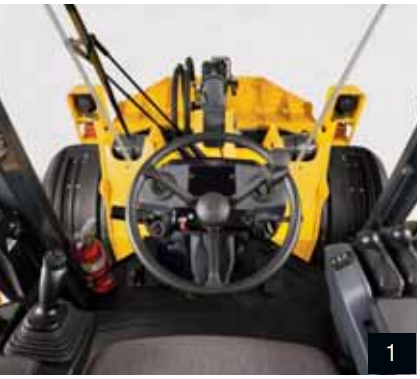
Joystick steering and hydraulic levers are within easy reach and move with the operator for more control with less fatigue.

Brake and throttle pedals have been repositioned and the front-console reshaped to make way for more legroom and comfort.

Automotive-style directional louvers provide effective airflow to help keep the glass clear and pressurized cab comfortable.

You'll find plenty of places to stow a coffee cup, cooler, and other carryons. Convenient 12-volt port powers cell phones and other electronic devices.

Cab noise has been noticeably minimized to help reduce operator fatigue.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1. Ten-percent more front glass, low-profile front console, and large side and rear windows allow unsurpassed 360-degree visibility.

2. Optional rearview camera and radar object-detection system give an operator "eyes-in-the-back-of-the-head" visibility on the LCD monitor screen. An audible alert is emitted for extra awareness in close quarters and high-traffic areas.

3. Platforms, handrails, and steps allow uninterrupted three-point access. There are no crossbars, decreasing the risk of slipping.

Expand your operator's comfort zone.

What operator wouldn't be more productive in the high-back air-ride seat of a K-Series Loader? An enhanced multifunction monitor displays operating and diagnostic info on a color LCD screen with easy-on-the-eyes clarity. Expansive tinted front glass and a low-profile console provide a commanding view of the work ahead. The quieter, more spacious cab boasts extra legroom and improved ergonomics, too, including fatigue-beating features like seat-mounted loader controls. And an expanded sealed-switch module with keyless start and easy pushbutton operation of even more functions.

Get in touch with your productive side.

If you want to get a handle on increased productivity, put your operator behind the controls of a K-Series Loader. Its enhanced multifunction LCD color monitor provides a wealth of machine info. And enables an operator to customize machine operation and response, weigh each bucket load, and view the action out back — all at the push of a button. Plus, the expanded solid-state sealed-switch module provides fingertip control of numerous other productivity-boosting features.

Multi-language color LCD monitor provides pushbutton access to a wealth of machine info and control:

1. Vital and general operating information, including transmission mode, gear, engine rpms, and ground speed.

2. Advanced onboard diagnostics with sensor information, calibration, and switch checks.

3. Customized machine settings such as Quick Shift, Auto-to-1st, and ride control. So you can match operating characteristics to specific jobs and conditions.

4. Optional embedded payload scale weighs each bucket load, helping fill trucks to the max.

5. Optional rearview camera and radar object-detection system display obstacles in the loader's path.

6. Keyless-start security system requires a numeric pass code (when enabled). Helps prevent unauthorized machine operation.

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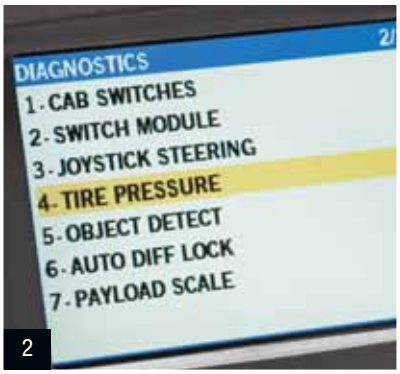

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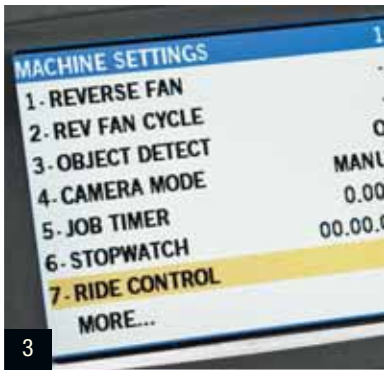

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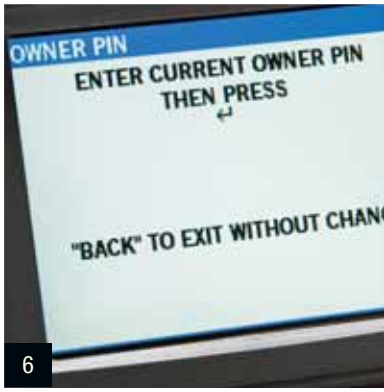

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Expanded sealed-switch module gives fingertip control of keyless start and 24 other machine functions. Enables the operator to adjust boom-height kick-out and return-to-carry, and activate return-to-dig from the seat.

Programmable clutch cutoff increases productivity in all kinds of conditions. Engaging the brakes disconnects the transmission while maintaining high engine speed. For smooth dumps, fast cycles, and no machine rollback.

Boom-height kick-out sets maximum desired dump height, while return-to-carry determines lowered-boom position. Use these two K-Series advantages to speed production in repetitive loading applications.

On 644K PowerIIel, return-to-dig places the attachment at a predetermined level position. Switch includes two presets, for increased convenience and productivity in applications requiring frequent attachment changeover.

SmartShift™ delivers smooth-as-silk gear changes, regardless of whether the bucket is empty or fully loaded.

Optional 5-speed transmission with torque converter lockup in gears 2–5 increases acceleration, speeds cycles, and optimizes power and fuel efficiency during transport, roading, and ramp climbing.

Spin control boosts productivity by improving traction in loose material or troublesome underfoot conditions. Reduces tire wear, fuel costs, and operator fatigue, too.

Automatic differential lock engages as soon as a tire begins to slip. It's ideal for inexperienced operators or high-traction applications. Optional on 644K–824K; unavailable on 844K.

Responsive steering combines with full 80-degree articulation for exceptional maneuverability in tight quarters — and faster cycle times.

Load-sensing closed-center hydraulics deliver only the power required for smooth boom and bucket functions. So there's no wasted power or fuel.

1. Ride control smoothes travel, allowing these loaders to navigate jobsites more quickly without losing their loads. Auto-actuation travel speed is programmable between 2 and 15 mph.

2. Choose either single-lever joystick or two-lever fingertip pilot-operated hydraulic controls. Joystick version is equipped with an FNR selector for convenient direction and full-range gear changes. Both include our innovative Quick-Shift feature for pushbutton gear changes, one gear at a time.

3. Joystick steering offers fatigue-beating comfort and is ideal for V-pattern truck loading. Standard on the 844K and available on the other K models, it adapts to ground speed to deliver smooth low-effort control. Even during load-and-carry.

Hard work was never this easy.

Big productivity shouldn't require a lot of extra effort. And it won't on a K-Series Loader. John Deere PowerTech diesels provide impressive acceleration and torque, along with the horsepower needed for fast and full bucket fills. Increased hydraulic flow provides excellent low-engine-speed performance, and quick steering response and boom-up speed. Combined with load-sensing closed-center hydraulics, low-effort controls, and smooth-shifting PowerShift™ transmission, maximum productivity comes naturally. To "weigh in" on which K-Series Loader is right for your operation, see your John Deere dealer.

Parallel lift that's simply unparalleled.

You don't have to sacrifice powerful digging forces to get parallel lift. The 644K Powerllel delivers the best of both, so you can have your loader and forklift, too. Unlike traditional tool-carrier linkages, our innovative design allows load forces to work with, not against, the boom. For big breakout force, even in difficult digging. Impressive torque throughout the entire dump and rollback range enables the 644K to excel at a wide variety of material-handling tasks. But don't just look for these Powerllel advantages in the numbers on a spec sheet. The best way to appreciate them is on your jobsite. Whatever the job, whatever the load, you'll discover parallel lift that's without parallel.

Powerllel's unique design separates the bell crank from the cross tube, attaching instead to the loader frame via a Y-shape link. This "free-floating" bell-crank design increases boom-cylinder torque, for unsurpassed boom and bucket breakout.

Want to test the power of a 644K Powerllel Loader? Attach a bucket and demo one against a comparable-size tool carrier in tough digging. The results will win you over.

Tire and axle options let you equip your 644K Powerllel Loader for material handling on a wide variety of terrain.


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1. Unique Y-link, low-mounted boom cylinders, and Hi-Vis coupler provide clearly superior visibility to the work tool and throughout the lift arc.

2. Hi-Vis coupler lets you easily change attachments from the cab. Conforms to ISO23727, allowing it to pick up a broad range of John Deere and other attachments. Coupler keeps the attachment close to the machine, enhancing stability and breakout performance.

3. Unlike tool carriers that lose performance past the level position, the 644K Powerllel delivers outstanding breakout throughout the entire dump and rollback range. To conquer tough tasks such as sorting and loading logs.

Axle choices include front differential lock with conventional rear and front and rear differential locks (644K–824K); conventional front and rear and limited-slip front and rear (844K).

Automatic differential lock engages as soon as a tire begins to slip. It's ideal for inexperienced operators or applications requiring continuous high traction.

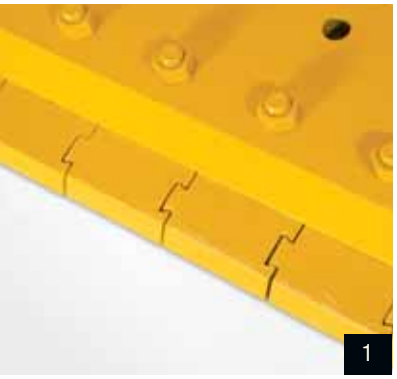
Powered cab pre-cleaner provides a cleaner interior when working in airborne debris.

Corrosion package shields electrical components and connections for longer life — so corrosion won't short-circuit productivity.

Advanced air-screen kits protect the engine and cooling system from debris while increasing airflow and preventing overheating.

High-lift loaders feature an optional, factory-installed boom that extends reach by 14 to 22 inches so you can move materials and push productivity to even greater heights.

Heated mirrors prevent fog and ice from obstructing the view and affecting productivity.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1. Equip your loader with the edges or teeth that best fit your application. Unique reversible and interchangeable design and through-hardened steel construction of JAGZ™ help them deliver more than twice the life of conventional edges.

2. Optional 5-speed transmission with torque converter lockup in gears 2–5 increases acceleration, speeds cycles, and optimizes power and fuel efficiency during transport, roading, and ramp climbing.

3. With greater visibility to the work tool and an improved load path, the Hi-Vis coupler and forks (available on 644K) help both loader and operator be more productive.

4. Embedded payload scale enables you to fill each truck to its limit. Powered by LoadRite™ technology, it's available on all Z-bar and high-lift loaders.

Explore your options.

Standard equipped with plenty of production-enhancing features, K-Series Loaders can handle almost anything. But if yours isn't just any application, we've got you covered with a wide variety of factory- or dealer-installed options. Work in a high-debris, extreme-temperature, or corrosive environment? Need a high-lift boom or long-life cutting edges to help maximize productivity and minimize costs? We can equip your loader with exactly what you need for your kind of work.

Nothing runs like a Deere, because nothing is built like one.

When you've got hungry hoppers or empty trucks depending on your loader, downtime is more than a downer. It's unacceptable. Boost your uptime (and your bottom line) with K-Series advantages such as solid-state electronics, highly efficient Quad-Cool,™ advanced diagnostic monitors, and NeverGrease™ pin joints. You'll also benefit from traditional John Deere durability features such as heavy-duty wet-sleeve diesels, self-adjusting wet-disc brakes, four-plate loader towers, and double-tapered articulation-joint roller bearings. Plus, booms and mainframes so tough they're warranted for three years or 10,000 hours. When you know how they're built, you'll run a John Deere.

Large-capacity fuel tanks let you run longer between fill-ups. There's also a fast-fill option to get you back into the rat race more quickly.

You'll find fewer fuses, relays, connecters, and wiring harnesses. Instead, highly reliable circuit-board technology and sealed solid-state switches ensure the electrical integrity you need.

Sealed-switch module keeps out dust, moisture, and debris, so it virtually never wears out. Proven marine-grade touchpad eliminates rocker switches and nearly 100 wires and unsealed connections.

Expansive air-inlet surfaces increase airflow and prevent overheating, while keeping the cooling cores debris free. Three-millimeter side-screen perforations serve as a "first filter."

Automatic park brake, bypass-start protection, continuous handrails, and wide slip-resistant steps and platforms help keep operators out of harm's way.

1. Quad-Cool design places coolers in a unique boxed configuration that's isolated from engine heat for increased efficiency and durability. Optional fan automatically reverses at predetermined intervals, or can be programmed through the monitor, to eject debris from the cores.

2. Bulkhead fittings eliminate long hoses, simplifying replacement and component exchange.

3. Exclusive NeverGrease option's lifetime sealed and lubricated roller bearings and Teflon®-embedded bushings deliver consistent, extended pin-joint life.

Large hinged service doors swing open wide for ample ground-level access. All daily servicing is done on the same side.

NeverGrease pin joints eliminate numerous zerks and the daily attention they demand. An exclusive K-Series option, they significantly reduce operating cost.

Maintenance personnel will appreciate the common-sense locations and ease with which powertrain, hydraulic, and cab filters are replaced. Common hydraulic and transmission fluid- and filter-change intervals further simplify service.

Coolers resist plugging, and both sides are easily accessible for cleaning. Hydraulically driven fan runs only as needed, reducing fuel consumption and debris flow through the cores.

Lockable compartment swings open, offering convenient ground-level access to batteries and electrical-disconnect switch.

Auto-idle automatically applies the brakes and reduces engine speed to help conserve fuel after an operator-determined period of inactivity. Auto shutdown turns off the engine after an extended time of inactivity.

The bucks stop here.

Servicing big iron doesn't have to be a big production. And it isn't on a K-Series. Swing open the large side shields and you'll see the many ways these loaders minimize maintenance. Our unique Quad-Cool system and swing-out fan provide wide-open access to both sides of the individually mounted coolers for simplified cleanout. Grouped same-side service points make quick work of the daily routine. Easy-to-read sight gauges, quick-change filters, extended service intervals and advanced self-diagnostics — plus numerous other time- and money-saving features help make maintenance manageable.

1. Color-coded fluid-sample and diagnostic test ports help speed preventive maintenance and troubleshooting. Noninvasive design helps prevent contamination.

2. If something goes wrong, the easy-to-navigate LCD monitor provides diagnostic info and even offers possible troubleshooting solutions to decrease downtime.

3. Vertical spin-on engine, transmission, and in-tank hydraulic filters; quick-release fuel filters; and environmentally friendly fluid drains allow quick, no-spill changes.

4. 500-, 2,000-, and 4,000-hour engine, transmission, and hydraulic oil and filter intervals decrease planned downtime and expense. Available quick fluid-evacuation system helps speed servicing.

5. Conveniently displayed periodic lubrication and maintenance chart helps ensure that nothing is overlooked.

6. Under-hood light, see-through reservoir, and sight gauges simplify coolant, hydraulic, and transmission fluid-level checks.


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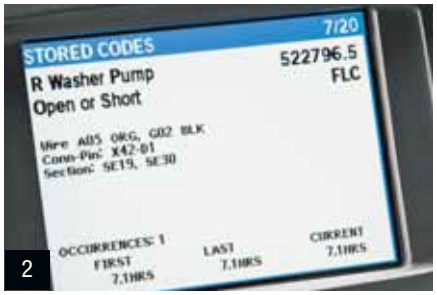

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Specifications

Engine — 644K Z-BAR / HIGH-LIFT / POWERLLEL™

Manufacturer and Model	John Deere PowerTech™ Plus 6068H
Non-Road Emission Standards	certified to EPA Tier 3 emissions
Cylinders	6
Valves Per Cylinder	4
Displacement	415 cu. in. (6.8 L)
Net Peak Power @ 1,700 rpm	232 hp (173 kW)
Net Peak Torque @ 1,400 rpm	749 lb.-ft. (1016 Nm)
Net Torque Rise	55%
Fuel System (electronically controlled)	high-pressure common rail
Lubrication	full-flow spin-on filter and integral cooler
Aspiration	turbocharged, charge air cooled
Air Cleaner	under-hood, dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 80-amp alternator (100-amp alternator optional)
Batteries (two 12 volt)	950 CCA (each)

Transmission

Type	countershaft-type PowerShift™
Torque Converter	single stage, single phase
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 two selectable modes: kick-down or kick-up/down; and three adjustable clutch-cutoff settings

	Standard 4-Speed Transmission		*5-Speed Transmission with Lockup Torque Converter*	
Travel Speeds (with 23.5-25 tires)	*Forward Maximum*	*Reverse Maximum*	*Forward Maximum*	*Reverse Maximum*
Gear 1	4.7 mph (7.6 km/h)	4.9 mph (7.9 km/h)	4.9 mph (7.9 km/h)	5.1 mph (8.2 km/h)
Gear 2	7.8 mph (12.6 km/h)	8.0 mph (12.9 km/h)	8.3 mph (13.4 km/h)	8.5 mph (13.6 km/h)
Gear 3	15.3 mph (24.7 km/h)	15.5 mph (24.9 km/h)	14.0 mph (22.6 km/h)	17.9 mph (28.8 km/h)
Gear 4	22.7 mph (36.6 km/h)	N/A	17.0 mph (27.4 km/h)	N/A
Gear 5	N/A	N/A	24.9 mph (40.0 km/h)	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 23.5-25 tires)	26 deg.
Brakes (conform to ISO 3450)	
Service Brakes	hydraulically actuated, inboard sun-shaft mounted, oil cooled, self adjusting, single disc
Parking Brake	automatic spring applied, hydraulically released, driveline mounted, oil cooled, multi disc

Tires

Choice of (with three-piece rims)*	*Tread Width*	*Width Over Tires*	*Change In Vertical Height*
23.5 R 25, 1 Star L-3	85.4 in. (2170 mm)	113.2 in. (2875 mm)	standard
23.5 R 25, 1 Star L-3 ($CaCl_2$ in rear tires)	85.4 in. (2170 mm)	109.4 in. (2778 mm)	standard
23.5 R 25, 20 PR L-3[β]	85.4 in. (2170 mm)	114.1 in. (2899 mm)	+ 0.3 in. (+ 7 mm)
750/65 R 25, 1 Star L-3T[β] (require 9-deg. rear-axle stops)	86.8 in. (2204 mm)	118.6 in. (3013 mm)	+ 0.4 in. (+ 9 mm)
28L-26, 14 PR LS2 Logger[†] (require 9-deg. rear-axle stops)	89.4 in. (2272 mm)	117.6 in. (2986 mm)	+ 0.8 in. (+ 21 mm)

**Based on Z-bar machine configuration; may change based on vehicle configuration, weight, or tire-pressure adjustments.*

[β]Equipped with five-piece heavy-duty rims.

[†]Equipped with one-piece rims.

Refill Capacities (U.S.)

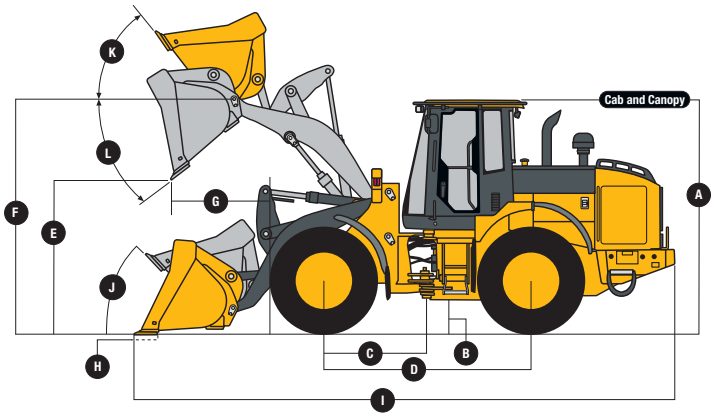
	644K Z-BAR / HIGH-LIFT / POWERLLEL
Fuel Tank (with ground-level fueling)	93 gal. (352 L)
Cooling System	31 qt. (29.5 L)
Engine Oil with Vertical Spin-On Filter	26 qt. (24.5 L)
Transmission Fluid with Vertical Filter	24 qt. (23 L)
Axle Oil (front and rear)	23 qt. (22 L)
Hydraulic Reservoir and Filters	29 gal. (110 L)
Park Brake Oil (wet disc)	20 oz. (0.6 L)

Hydraulic System/Steering

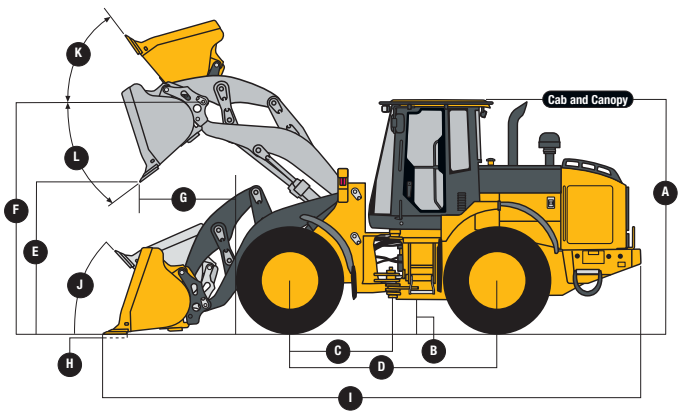
Pump (loader and steering)	variable-displacement, axial-piston pump; closed-center, pressure-compensating system		
Maximum Rated Flow @ 1,000 psi (6895 kPa) and 2,350 rpm	82 gpm (310 L/m)		
System Relief Pressure (loader and steering)	3,650 psi (25 166 kPa)		
Loader Controls	two-function valve, joystick control or fingertip controls, hydraulic-function enable/disable, optional third- and fourth-function valve with auxiliary lever		
Steering (conforms to ISO 5010)			
Type	power, fully hydraulic		
Articulation Angle	80-deg. arc (40 deg. each direction)		
Hydraulic Cycle Times	***Z-Bar***	***High-Lift***	***Powerllel***
Raise	5.5 sec.	5.5 sec.	5.5 sec.
Dump	1.4 sec.	1.4 sec.	1.9 sec.
Lower (float down)	3.0 sec.	3.0 sec.	2.8 sec.
Total	9.9 sec.	9.9 sec.	10.2 sec.
Turning Radius (measured to centerline of outside tire)	18 ft. 3 in. (5.57 m)		

Dimensions with Standard Configuration

		Z-Bar *4.25-cu.-yd. (3.2 m^3) pin-on bucket*	***High-Lift*** *4.25-cu.-yd. (3.2 m^3) pin-on bucket*	***Powerllel*** *4.0-cu.-yd. (3.1 m^3) hook-on bucket with coupler*
A	Height to Top of Cab and Canopy	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)	11 ft. 3 in. (3.43 m)
B	Ground Clearance	16.1 in. (408 mm)	16.1 in. (408 mm)	18.0 in. (461 mm)
C	Length from Centerline to Front Axle	5 ft. 3 in. (1.60 m)	5 ft. 3 in. (1.60 m)	5 ft. 3 in. (1.60 m)
D	Wheelbase	10 ft. 8 in. (3.26 m)	10 ft. 8 in. (3.26 m)	10 ft. 8 in. (3.26 m)
E	Dump Clearance	▲ (see page 21)	▲ (see page 21)	▲ (see page 22)
F	Height to Hinge Pin, Fully Raised	13 ft. 4 in. (4.07 m)	14 ft. 9 in. (4.49 m)	13 ft. 6 in. (4.117 m)
G	Dump Reach	▲▲ (see page 21)	▲▲ (see page 21)	▲▲ (see page 22)
H	Maximum Digging Depth	6.2 in. (159 mm)	10.0 in. (253 mm)	3.6 in. (91 mm)
I	Overall Length	▲▲▲ (see page 21)	▲▲▲ (see page 21)	▲▲▲ (see page 22)
J	Maximum Rollback at Ground Level	42 deg.	42 deg.	41 deg.
K	Maximum Rollback, Boom Fully Raised	55 deg.	47 deg.	55 deg.
L	Maximum Bucket Angle, Fully Raised	50 deg.	45 deg.	50 deg.



644K Z-BAR AND HIGH-LIFT LOADERS

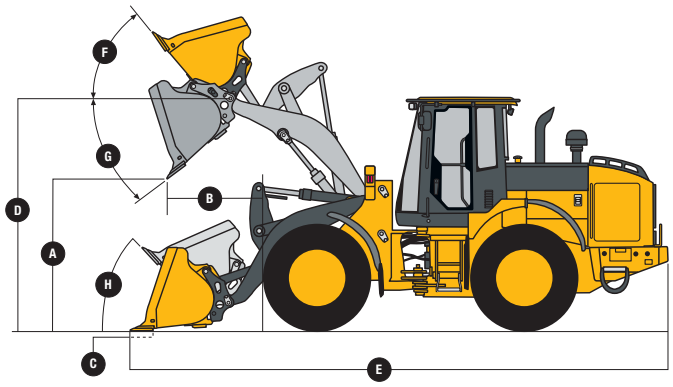


644K POWERLLEL LOADER

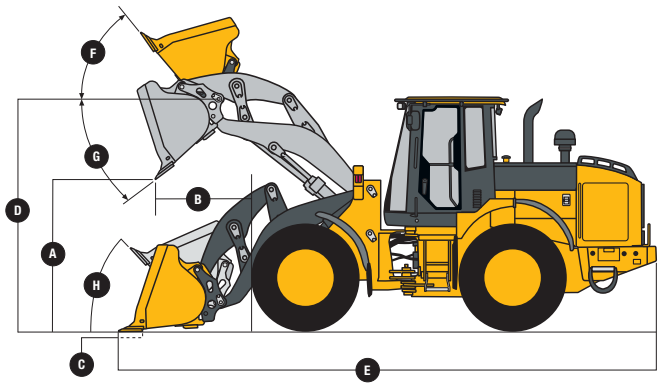
Dimensions with Quick-Coupler and Hook-On Bucket

644K Z-BAR / HIGH-LIFT / POWERLLEL

		Z-Bar	*High-Lift*	*Powerllel*
A	Dump Clearance	▲ (see page 21)	▲ (see page 22)	▲ (see page 22)
B	Dump Reach	▲▲ (see page 21)	▲▲ (see page 22)	▲▲ (see page 22)
C	Maximum Digging Depth	7.5 in. (192 mm)	11.0 in. (279 mm)	3.6 in. (91 mm)
D	Height to Hinge Pin, Fully Raised	13 ft. 4 in. (4.07 m)	14 ft. 9 in. (4.49 m)	13 ft. 6 in. (4.117 m)
E	Overall Length	▲▲▲ (see page 21)	▲▲▲ (see page 22)	▲▲▲ (see page 22)
F	Maximum Rollback, Boom Fully Raised	55 deg.	47 deg.	55 deg.
G	Maximum Bucket Angle, Fully Raised	45 deg.	45 deg.	50 deg.
H	Maximum Rollback at Ground Level	40.5 deg.	42 deg.	41 deg.



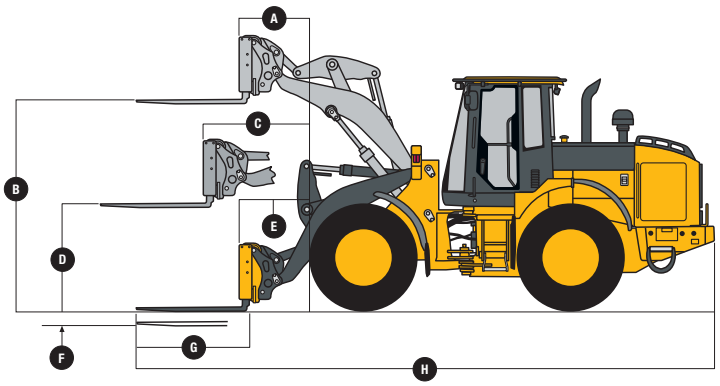
644K Z-BAR AND HIGH-LIFT LOADERS WITH QUICK-COUPLER AND HOOK-ON BUCKET



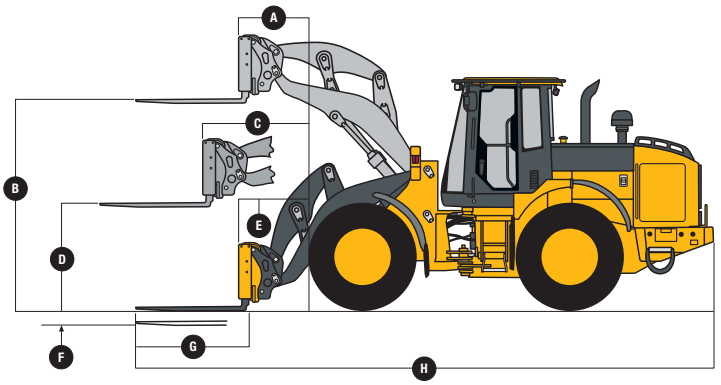
644K POWERLLEL LOADER WITH QUICK-COUPLER AND HOOK-ON BUCKET

Dimensions with Quick-Coupler and Hook-On Construction Fork

		Z-Bar	*High-Lift*	*Powerllel Construction*	*Powerllel Rockland Logging*
A	Reach, Fully Raised	33.0 in. (842 mm)	37.7 in. (958 mm)	32.2 in. (819 mm)	35.2 in. (895 mm)
B	Fork Height, Fully Raised	12 ft. 3 in. (3.74 m)	13 ft. 8 in. (4.16 m)	12 ft. 3 in. (3.74 m)	12 ft. 6 in. (3.81 m)
C	Maximum Reach, Fork Level	5 ft. 8 in. (1.73 m)	7 ft. 0 in. (2.13 m)	5 ft. 9 in. (1.76 m)	6 ft. 0 in. (1.83 m)
D	Maximum Reach, Fork Height	5 ft. 5 in. (1.66 m)	5 ft. 11 in. (1.80 m)	5 ft. 5 in. (1.66 m)	5 ft. 8 in. (1.74 m)
E	Reach, Ground Level	4 ft. 1 in. (1.26 m)	5 ft. 8 in. (1.72 m)	4 ft. 1 in. (1.25 m)	4 ft. 3 in. (1.28 m)
F	Depth Below Ground	6 in. (142 mm)	9 in. (234 mm)	3 in. (77 mm)	0.5 in. (13 mm)
G	Tine Length	▲ (see page 22)	▲ (see page 22)	▲ (see page 22)	▲ (see page 22)
H	Overall Length	▲▲ (see page 22)	▲▲ (see page 22)	▲▲ (see page 22)	▲▲ (see page 22)



644K Z-BAR AND HIGH-LIFT LOADERS WITH QUICK-COUPLER AND HOOK-ON CONSTRUCTION FORK



644K POWERLLEL LOADER WITH QUICK-COUPLER AND HOOK-ON CONSTRUCTION FORK

644K Z-Bar with Pin-On-Type Bucket

	General-Purpose
Bucket Type/Size	*with Bolt-On Edge*
Capacity, Heaped	4.25 cu. yd. (3.2 m^3)
Capacity, Struck	3.7 cu. yd. (2.8 m^3)
Bucket Weight	3,826 lb. (1735 kg)
Bucket Width	10 ft. 0 in. (3.04 m)
Breakout Force	33,903 lb. (15 378 kg)
Tipping Load, Straight	33,576 lb. (15 230 kg)
Tipping Load, 40-Deg. Full Turn	28,937 lb. (13 126 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	5 ft. 6 in. (1.67 m)
▲▲ Reach, 45-Deg. Dump, Full Height	3 ft. 8 in. (1.12 m)
▲ Dump Clearance, 45 Deg., Full Height	9 ft. 4 in. (2.86 m)
▲▲▲ Overall Length, Bucket on Ground	26 ft. 5 in. (8.14 m)
Loader Clearance Circle, Bucket Carry Position	43 ft. 3.5 in. (13.20 m)
Operating Weight	40,036 lb. (18 160 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

644K High-Lift with Pin-On-Type Bucket

	General-Purpose
Bucket Type/Size	*with Bolt-On Edge*
Capacity, Heaped	4.25 cu. yd. (3.2 m^3)
Capacity, Struck	3.7 cu. yd. (2.8 m^3)
Bucket Weight	3,827 lb. (1736 kg)
Bucket Width	10 ft. 0 in. (3.04 m)
Breakout Force	30,384 lb. (13 782 kg)
Tipping Load, Straight	26,958 lb. (12 228 kg)
Tipping Load, 40-Deg. Full Turn	23,109 lb. (10 482 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	6 ft. 11 in. (2.12 m)
▲▲ Reach, 45-Deg. Dump, Full Height	4 ft. 1 in. (1.24 m)
▲ Dump Clearance, 45 Deg., Full Height	10 ft. 9 in. (3.28 m)
▲▲▲ Overall Length, Bucket on Ground	28 ft. 3 in. (8.61 m)
Loader Clearance Circle, Bucket Carry Position	44 ft. 8.6 in. (13.63 m)
Operating Weight	40,799 lb. (18 506 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

644K Z-Bar with Quick-Coupler and Hook-On-Type Bucket

	General-Purpose
Bucket Type/Size	*with Bolt-On Edge*
Capacity, Heaped	4.0 cu. yd. (3.1 m^3)
Capacity, Struck	3.6 cu. yd. (2.7 m^3)
Bucket Weight with Coupler	4,682 lb. (2124 kg)
Bucket Width	9 ft. 10 in. (3.00 m)
Breakout Force	30,124 lb. (13 664 kg)
Tipping Load, Straight	30,361 lb. (13 772 kg)
Tipping Load, 40-Deg. Full Turn	26,043 lb. (11 813 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	5 ft. 11 in. (1.81 m)
▲▲ Reach, 45-Deg. Dump, Full Height	4 ft. 3 in. (1.29 m)
▲ Dump Clearance, 45 Deg., Full Height	9 ft. 2 in. (2.79 m)
▲▲▲ Overall Length, Bucket on Ground	27 ft. 3 in. (8.31 m)
Loader Clearance Circle, Bucket Carry Position	43 ft. 7 in. (13.29 m)
Operating Weight	40,889 lb. (18 547 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments. The information above is based on a market-representative coupler and will vary by coupler manufacturer.

644K High-Lift with Quick-Coupler and Hook-On-Type Bucket

	General-Purpose
Bucket Type/Size	*with Bolt-On Edge*
Capacity, Heaped	4.0 cu. yd. (3.1 m^3)
Capacity, Struck	3.6 cu. yd. (2.7 m^3)
Bucket Weight with Coupler	4,682 lb. (2124 kg)
Bucket Width	9 ft. 10 in. (3.00 m)
Breakout Force	26,989 lb. (12 242 kg)
Tipping Load, Straight	24,507 lb. (11 116 kg)
Tipping Load, 40-Deg. Full Turn	20,882 lb. (9472 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	7 ft. 1 in. (2.15 m)
▲▲ Reach, 45-Deg. Dump, Full Height	4 ft. 5 in. (1.34 m)
▲ Dump Clearance, 45 Deg., Full Height	10 ft. 4 in. (3.16 m)
▲▲▲ Overall Length, Bucket on Ground	28 ft. 9 in. (8.77 m)
Loader Clearance Circle, Bucket Carry Position	45 ft. 1 in. (13.73 m)
Operating Weight	41,345 lb. (18 754 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments. The information above is based on a market-representative coupler and will vary by coupler manufacturer.

644K Powerllel with Quick-Coupler and Hook-On-Type Bucket

	General-Purpose
Bucket Type/Size	*with Bolt-On Edge*
Capacity, Heaped	4.0 cu. yd. (3.1 m^3)
Capacity, Struck	3.5 cu. yd. (2.6 m^3)
Bucket Weight with Coupler	4,597 lb. (2085 kg)
Bucket Width	10 ft. 0 in. (3.04 m)
Breakout Force	26,519 lb. (12 029 kg)
Tipping Load, Straight	29,035 lb. (13 170 kg)
Tipping Load, 40-Deg. Full Turn	24,862 lb. (11 277 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	5 ft. 9 in. (1.74 m)
▲▲ Reach, 45-Deg. Dump, Full Height	3 ft. 11 in. (1.20 m)
▲ Dump Clearance, 45 Deg., Full Height	9 ft. 2 in. (2.79 m)
▲▲▲ Overall Length, Bucket on Ground	27 ft. 11 in. (8.504 m)
Loader Clearance Circle, Bucket Carry Position	43 ft. 10 in. (13.36 m)
Operating Weight	43,563 lb. (19 760 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

Specifications with Quick-Coupler and Hook-On Construction Fork

	Z-Bar		***High-Lift***		***Powerllel*** *Construction*		*Rockland Logging**
▲ Tine Length	*60 in. (1.52 m)*	*72 in. (1.83 m)*	*60 in. (1.52 m)*	*72 in. (1.83 m)*	*60 in. (1.52 m)*	*72 in. (1.83 m)*	*60 in. (1.52 m)*
▲▲ Overall Length	29 ft. 0 in. (8.84 m)	30 ft. 0 in. (9.15 m)	30 ft. 6.7 in. (9.31 m)	31 ft. 7 in. (9.61 m)	29 ft. 6 in. (9.00 m)	30 ft. 6 in. (9.30 m)	30 ft. 2 in. (9.20 m)
Tipping Load, Straight (fork level, load centered and positioned at 50% tine length)	22,520 lb. (10 215 kg)	21,363 lb. (9690 kg)	19,269 lb. (8740 kg)	18,343 lb. (8320 kg)	23,253 lb. (10 547 kg)	22,026 lb. (9991 kg)	20,698 lb. (9215 kg)
Tipping Load, 40-Deg. Full Turn (fork level, load centered and positioned at 50% tine length)	19,429 lb. (8813 kg)	18,411 lb. (8351 kg)	16,512 lb. (7490 kg)	15,697 lb. (7120 kg)	20,010 lb. (9077 kg)	18,932 lb. (8588 kg)	17,985 lb. (7800 kg)
Operating Weight	39,937 lb. (18 115 kg)	40,069 lb. (18 175 kg)	40,392 lb. (18 321 kg)	40,524 lb. (18 382 kg)	42,609 lb. (19 327 kg)	42,742 lb. (19 388 kg)	43,122 lb. (20 305 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments. The information above is based on a market-representative coupler and will vary by coupler manufacturer.

**With logging tires and rims, and optional forestry counterweight package.*

Adjustments to Operating Weights and Tipping Loads with Buckets

Adjustments to operating weights and tipping loads are based on Z-bar machine and standard equipment with pin-on 4.25-cu.-yd. (3.2 m^3) general-purpose bucket with bolt-on cutting edge, ROPS cab, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator*

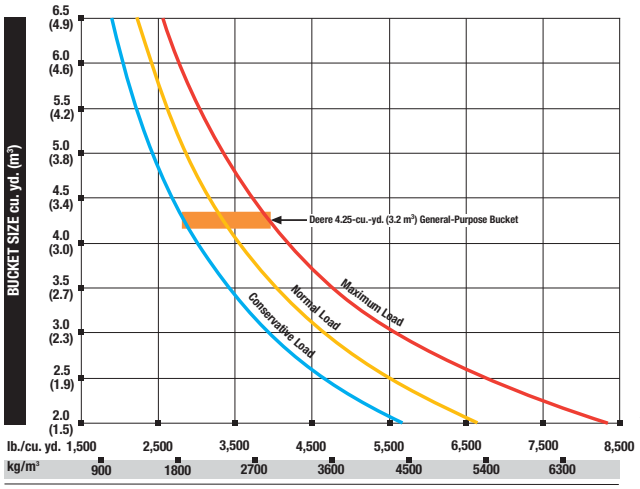
Add (+) or deduct (–) lb. (kg) as indicated for loaders with three-piece rims and	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 40-Deg. Full Turn, SAE*
23.5 R 25, 1 Star L-3	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)
23.5 R 25, 1 Star L-3 ($CaCl_2$ in rear tires)	+ 2,573 lb. (+ 1167 kg)	+ 3,881 lb. (+ 1760 kg)	+ 3,420 lb. (+ 1551 kg)
23.5 R 25, 20 PR L-3[ß]	+ 18 lb. (+ 8 kg)	+ 13 lb. (+ 6 kg)	+ 12 lb. (+ 5 kg)
750/65 R 25, 1 Star L-3T[ß] (require 9-deg. rear-axle stops)	+ 1,349 lb. (+ 612 kg)	+ 1,017 lb. (+ 461 kg)	+ 896 lb. (+ 407 kg)
28L-26, 14 PR LS2 Logger[†] (require 9-deg. rear-axle stops)	– 692 lb. (– 314 kg)	– 521 lb. (– 236 kg)	– 459 lb. (– 208 kg)

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

[ß]Equipped with five-piece heavy-duty rims.

[†]Equipped with one-piece rims.

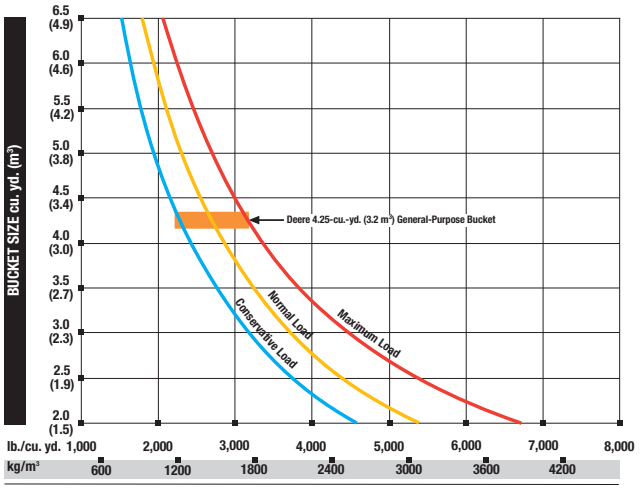
Bucket Selection Guides*



644K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

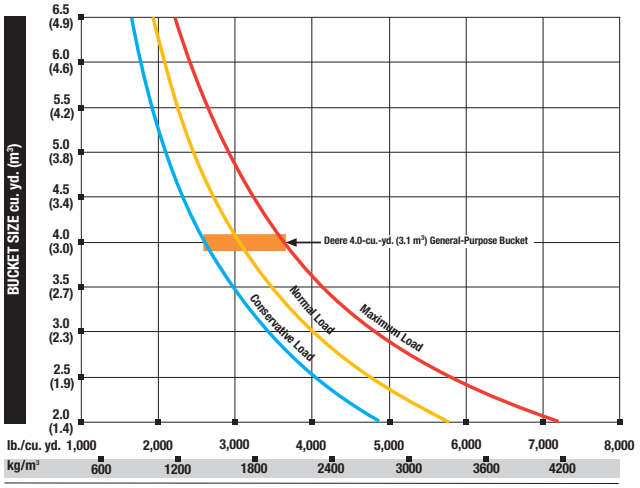
* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.



644K HIGH-LIFT LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.



644K POWERLLEL LOADER WITH QUICK-COUPLER AND HOOK-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.

Specifications

Engine — 724K Z-BAR / HIGH-LIFT

Manufacturer and Model	John Deere PowerTech™ Plus 6090H
Non-Road Emission Standards	certified to EPA Tier 3 emissions
Cylinders	6
Valves Per Cylinder	4
Displacement	548 cu. in. (9.0 L)
Net Peak Power @ 1,800 rpm	264 hp (197 kW)
Net Peak Torque @ 1,300 rpm	852 lb.-ft. (1159 Nm)
Net Torque Rise	36%
Fuel System (electronically controlled)	high-pressure common rail
Lubrication	full-flow spin-on filter and integral cooler
Aspiration	turbocharged, charge air cooled
Air Cleaner	dual-element dry type
Fan Drive	hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 80-amp alternator (100-amp alternator optional)
Batteries (two 12 volt)	1,400 CCA (each)

Transmission

Type	countershaft-type PowerShift™
Torque Converter	single stage, single phase
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 two selectable modes: kick-down or kick-up/down; and three adjustable clutch-cutoff settings

	Standard 4-Speed Transmission		*5-Speed Transmission with Lockup Torque Converter*	
Travel Speeds (with 23.5 R 25, 1 Star L3 tires)	*Forward Maximum*	*Reverse Maximum*	*Forward Maximum*	*Reverse Maximum*
Gear 1	4.5 mph (7.2 km/h)	4.7 mph (7.6 km/h)	4.7 mph (7.5 km/h)	4.9 mph (7.9 km/h)
Gear 2	7.4 mph (11.9 km/h)	7.8 mph (12.5 km/h)	8.3 mph (13.4 km/h)	8.1 mph (13.0 km/h)
Gear 3	14.4 mph (23.1 km/h)	15.1 mph (24.2 km/h)	14.0 mph (22.6 km/h)	17.9 mph (28.8 km/h)
Gear 4	22.1 mph (35.6 km/h)	N/A	17.0 mph (27.4 km/h)	N/A
Gear 5	N/A	N/A	24.9 mph (40.0 km/h)	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, 1 Star L3 tires)	26 deg.
Brakes (conform to ISO 3450)	
Service Brakes	hydraulically actuated, inboard, carrier mounted, pressure oil cooled, self adjusting, multi disc
Parking Brake	automatic spring applied, hydraulically released, oil cooled, multi disc

Tires

Choice of (with five-piece rims)*	*Tread Width*	*Width Over Tires*	*Change In Vertical Height*
23.5 R 25, 1 Star L-3	85.4 in. (2170 mm)	113.4 in. (2880 mm)	standard
23.5-25, 20 PR L-3	85.4 in. (2170 mm)	113.9 in. (2893 mm)	+ 0.5 in. (+ 13 mm)
28L-26, 14 PR LS2 Logger§†	89.4 in. (2272 mm)	117.6 in. (2987 mm)	+ 0.8 in. (+ 21 mm)
750/65 R 25, 1 Star L-3T§	86.8 in. (2204 mm)	118.8 in. (3018 mm)	+ 0.3 in. (+ 8 mm)

**Based on Z-bar machine configuration; may change based on vehicle configuration, weight, or tire-pressure adjustments.*

§Requires 9-deg. rear axle stops.

†Equipped with one-piece rims.

Refill Capacities (U.S.)

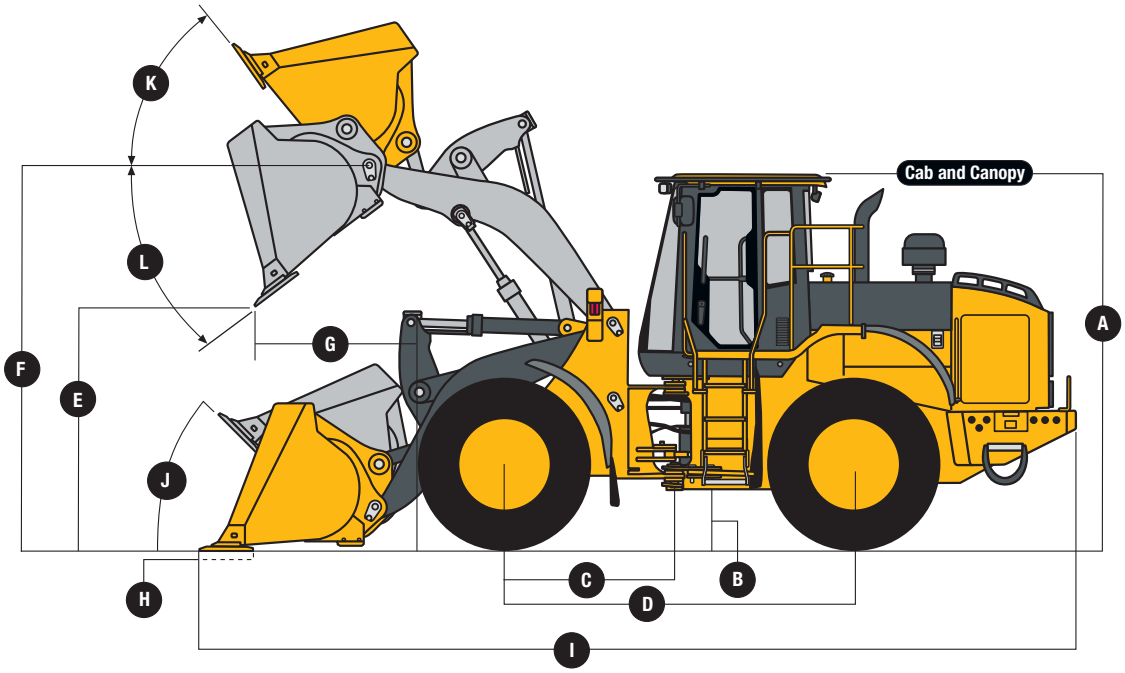
	724K Z-BAR / HIGH-LIFT
Fuel Tank (with ground-level fueling)	93 gal. (352 L)
Cooling System	36 qt. (34 L)
Engine Oil with Vertical Spin-On Filter	30 qt. (28 L)
Transmission Fluid with Vertical Filter	25 qt. (24 L)
Axle Oil (front and rear)	23 qt. (22 L)
Hydraulic Reservoir and Filters	29 gal. (110 L)
Park Brake Oil (wet disc)	20 oz. (0.6 L)

Hydraulic System/Steering

Pump (loader and steering)	variable-displacement, axial-piston pump; closed-center, pressure-compensating system	
Maximum Rated Flow @ 1,000 psi (6895 kPa) and 2,250 rpm	82 gpm (310 L/m)	
System Relief Pressure (loader and steering)	3,650 psi (25 166 kPa)	
Loader Controls	two-function valve, joystick control or fingertip controls, hydraulic-function enable/disable, optional third- and fourth-function valve with auxiliary lever	
Steering (conforms to ISO 5010)		
Type	power, fully hydraulic	
Articulation Angle	80-deg. arc (40 deg. each direction)	
Hydraulic Cycle Times	***Z-Bar***	***High-Lift***
Raise	5.5 sec.	5.5 sec.
Dump	1.2 sec.	1.4 sec.
Lower (float down)	3.0 sec.	3.0 sec.
Total	9.7 sec.	9.9 sec.
Turning Radius (measured to centerline of outside tire)	18 ft. 6 in. (5.64 m)	

Dimensions with Standard Configuration

		Z-Bar *4.75-cu.-yd. (3.6 m^3) pin-on bucket*	***High-Lift*** *4.25-cu.-yd. (3.2 m^3) pin-on bucket*
A	Height to Top of Cab and Canopy	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)
B	Ground Clearance	16.1 in. (0.41 m)	16.0 in. (0.40 m)
C	Length from Centerline to Front Axle	5 ft. 3 in. (1.60 m)	5 ft. 3 in. (1.60 m)
D	Wheelbase	10 ft. 8 in. (3.26 m)	10 ft. 8 in. (3.26 m)
E	Dump Clearance	▲ (see page 26)	▲ (see page 26)
F	Height to Hinge Pin, Fully Raised	13 ft. 4 in. (4.07 m)	14 ft. 8 in. (4.46 m)
G	Dump Reach	▲▲ (see page 26)	▲▲ (see page 26)
H	Maximum Digging Depth	6.6 in. (167 mm)	10.0 in. (253 mm)
I	Overall Length	▲▲▲ (see page 26)	▲▲▲ (see page 26)
J	Maximum Rollback at Ground Level	41 deg.	42 deg.
K	Maximum Rollback, Boom Fully Raised	55 deg.	47 deg.
L	Maximum Bucket Angle, Fully Raised	50 deg.	45 deg.



724K Z-BAR AND HIGH-LIFT LOADERS

724K Z-Bar with Pin-On-Type Bucket

Bucket Type/Size	*General-Purpose with Bolt-On Edge*	*General-Purpose with Bolt-On Edge*
Capacity, Heaped	4.75 cu. yd. (3.6 m^3)	4.25 cu. yd. (3.2 m^3)
Capacity, Struck	4.2 cu. yd. (3.2 m^3)	3.5 cu. yd. (3.0 m^3)
Bucket Weight	4,016 lb. (1822 kg)	3,827 lb. (1736 kg)
Bucket Width	10 ft. 0 in. (3.04 m)	10 ft. 0 in. (3.04 m)
Breakout Force	31,742 lb. (14 398 kg)	34,408 lb. (15 607 kg)
Tipping Load, Straight	36,352 lb. (16 489 kg)	36,612 lb. (16 607 kg)
Tipping Load, 40-Deg. Full Turn	31,314 lb. (14 204 kg)	31,566 lb. (14 318 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	5 ft. 5 in. (1.65 m)	5 ft. 4 in. (1.61 m)
▲▲ Reach, 45-Deg. Dump, Full Height	3 ft. 9 in. (1.13 m)	3 ft. 6 in. (1.06 m)
▲ Dump Clearance, 45 Deg., Full Height	9 ft. 2 in. (2.79 m)	9 ft. 4 in. (2.86 m)
▲▲▲ Overall Length, Bucket on Ground	27 ft. 4 in. (8.34 m)	27 ft. 0 in. (8.24 m)
Loader Clearance Circle, Bucket Carry Position	43 ft. 2 in. (13.17 m)	43 ft. 2 in. (13.15 m)
Operating Weight	42,174 lb. (19 130 kg)	41,985 lb. (19 044 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

724K High-Lift with Pin-On-Type Bucket

Bucket Type/Size	*General-Purpose with Bolt-On Edge*	*General-Purpose with Bolt-On Edge*
Capacity, Heaped	4.25 cu. yd. (3.2 m^3)	4.75 cu. yd. (3.6 m^3)
Capacity, Struck	3.7 cu. yd. (2.8 m^3)	4.2 cu. yd. (3.2 m^3)
Bucket Weight	3,827 lb. (1736 kg)	4,017 lb. (1822 kg)
Bucket Width	10 ft. 0 in. (3.04 m)	10 ft. 0 in. (3.04 m)
Breakout Force	30,610 lb. (13 884 kg)	28,590 lb. (12 968 kg)
Tipping Load, Straight	29,488 lb. (13 376 kg)	29,041 lb. (13 173 kg)
Tipping Load, 40-Deg. Full Turn	25,299 lb. (11 476 kg)	24,885 lb. (11 287 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	6 ft. 9 in. (2.06 m)	6 ft. 10 in. (2.09 m)
▲▲ Reach, 45-Deg. Dump, Full Height	3 ft. 10 in. (1.18 m)	4 ft. 1 in. (1.25 m)
▲ Dump Clearance, 45 Deg., Full Height	10 ft. 11 in. (3.33 m)	10 ft. 6 in. (3.21 m)
▲▲▲ Overall Length, Bucket on Ground	28 ft. 7 in. (8.71 m)	28 ft. 11 in. (8.81 m)
Loader Clearance Circle, Bucket Carry Position	44 ft. 9 in. (13.63 m)	45 ft. 0 in. (13.70 m)
Operating Weight	42,483 lb. (19 270 kg)	42,673 lb. (19 356 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

Adjustments to Operating Weights and Tipping Loads with Buckets

Adjustments to operating weights and tipping loads are based on Z-bar machine and pin-on 4.75-cu.-yd. (3.6 m^3) general-purpose bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator*

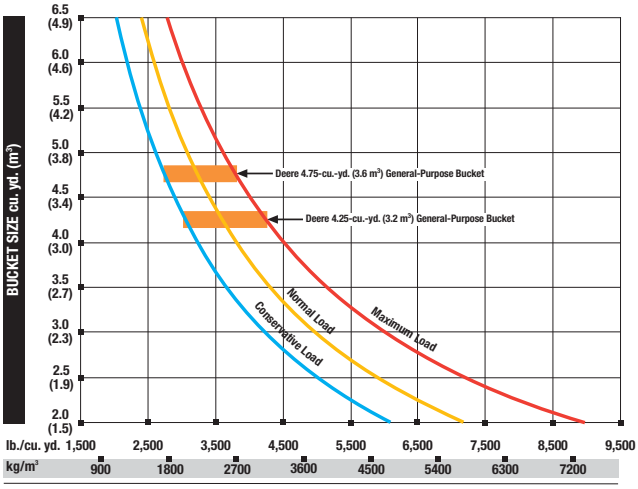
Add (+) or deduct (–) lb. (kg) as indicated for loaders with five-piece rims and	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 40-Deg. Full Turn, SAE*
23.5 R 25, 1 Star L-3	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)
23.5-25, 20 PR L-3	+ 19 lb. (+ 8 kg)	+ 13 lb. (+ 6 kg)	+ 11 lb. (+ 5 kg)
28L-26, 14 PR LS2 Logger§†	– 1,018 lb. (– 462 kg)	– 767 lb. (– 348 kg)	– 677 lb. (– 307 kg)
750/65 R 25, 1 Star L-3T§	+ 1,021 lb. (+ 463 kg)	+ 768 lb. (+ 348 kg)	+ 675 lb. (+ 306 kg)

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

§Requires 9-deg. rear axle stops.

†Equipped with one-piece rims.

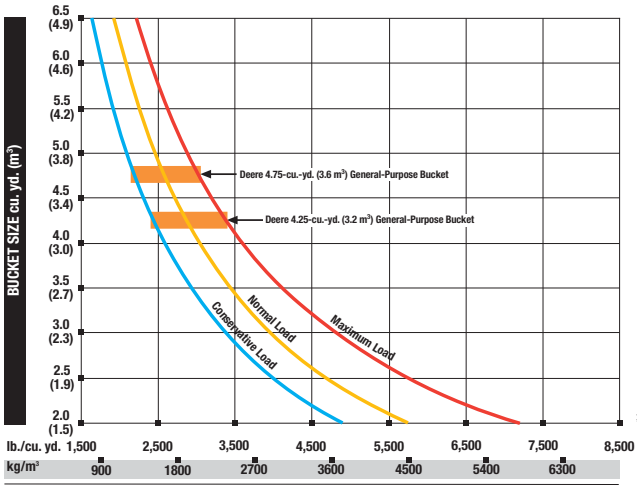
Bucket Selection Guides*



724K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.



724K HIGH-LIFT LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.

Specifications

Engine — 744K Z-BAR / HIGH-LIFT

Manufacturer and Model	John Deere PowerTech™ Plus 6090H
Non-Road Emission Standards	certified to EPA Tier 3 emissions
Cylinders	6
Valves Per Cylinder	4
Displacement	548 cu. in. (9.0 L)
Net Peak Power @ 1,500 rpm	304 hp (227 kW)
Net Peak Torque @ 1,400 rpm	1,074 lb.-ft. (1456 Nm)
Net Torque Rise	47%
Fuel System (electronically controlled)	high-pressure common rail
Lubrication	full-flow spin-on filter and integral cooler
Aspiration	turbocharged, charge air cooled
Air Cleaner	under-hood, dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 80-amp alternator (100-amp alternator optional)
Batteries (two 12 volt)	1,400 CCA (each)

Transmission

Type	countershaft-type PowerShift™
Torque Converter	single stage, dual phase with freewheeling stator
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 two selectable modes: kick-down or kick-up/down; and three adjustable clutch-cutoff settings

	Standard 4-Speed Transmission		*5-Speed Transmission with Lockup Torque Converter*	
Travel Speeds (with 26.5 R 25, 1 Star L3 tires)	*Forward Maximum*	*Reverse Maximum*	*Forward Maximum*	*Reverse Maximum*
Gear 1	4.6 mph (7.4 km/h)	4.6 mph (7.4 km/h)	5.2 mph (8.4 km/h)	5.2 mph (8.4 km/h)
Gear 2	8.6 mph (13.8 km/h)	8.6 mph (13.8 km/h)	9.4 mph (15.2 km/h)	8.7 mph (14.0 km/h)
Gear 3	13.1 mph (21.1 km/h)	18.8 mph (30.2 km/h)	14.7 mph (23.6 km/h)	21.5 mph (34.6 km/h)
Gear 4	24.9 mph (40.0 km/h)	N/A	21.5 mph (34.6 km/h)	N/A
Gear 5	N/A	N/A	24.9 mph (40.0 km/h)	N/A

Axles/Brakes

Final Drives	heavy-duty inboard planetary
Differentials	hydraulic locking front with conventional rear — standard; dual locking front and rear — optional
Rear Axle Oscillation, Stop to Stop (with 26.5 R 25, 1 Star L3 tires)	26 deg.
Brakes (conform to ISO 3450)	
Service Brakes	hydraulically actuated, inboard, sun-gear mounted, oil cooled, self adjusting, single disc
Parking Brake	automatic spring applied, hydraulically released, oil cooled, multi disc

Tires

Choice of (with five-piece rims)*	*Tread Width*	*Width Over Tires*	*Change In Vertical Height*
26.5 R 25, 1 Star L-3	86.5 in. (2196 mm)	116.4 in. (2957 mm)	standard
26.5-25, 20 PR L-3	86.5 in. (2196 mm)	116.3 in. (2954 mm)	+ 1.1 in. (+ 29 mm)
26.5-25, 20 PR L-5§	86.5 in. (2196 mm)	116.3 in. (2954 mm)	+ 2.6 in. (+ 66 mm)

**Based on Z-bar machine configuration; may change based on vehicle configuration, weight, or tire-pressure adjustments.*

§Requires 8-deg. rear axle stops, close-mounted steps, and no fenders.

Refill Capacities (U.S.) — 744K Z-BAR / HIGH-LIFT

Fuel Tank (with ground-level fueling)	124 gal. (469 L)
Cooling System	47 qt. (45 L)
Engine Oil with Vertical Spin-On Filter	36 qt. (34 L)
Transmission Fluid with Vertical Filter	29.5 qt. (27.9 L)
Axle Oil (front and rear)	49 qt. (46 L)
Hydraulic Reservoir and Filters	42 gal. (159 L)
Park Brake Oil (wet disc)	24 oz. (0.7 L)

Hydraulic System/Steering

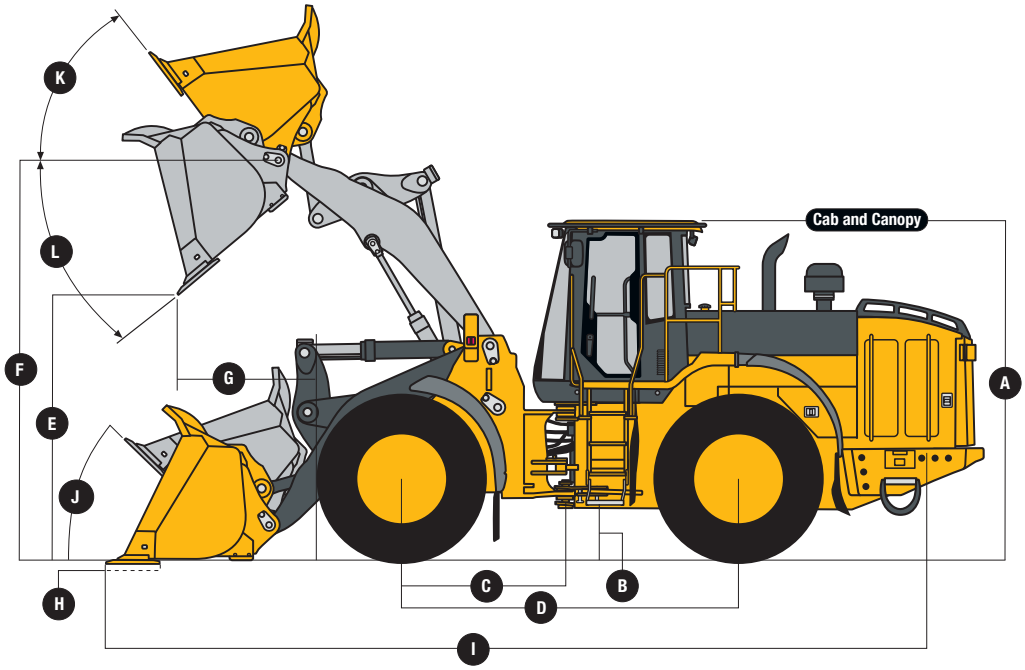
Pump (loader and steering)	two variable-displacement, load-sensing axial-piston pumps; closed-center system
Maximum Rated Flow @ 1,000 psi (6895 kPa) and 2,250 rpm	136 gpm (515 L/m)
System Relief Pressure (loader and steering)	3,288 psi (22 670 kPa)
Loader Controls	two-function valve; single- or dual-lever controls; control lever lockout feature; optional third- and fourth-function valve with auxiliary levers
Steering (conforms to ISO 5010)	
Type	power, fully hydraulic
Articulation Angle	80-deg. arc (40 deg. each direction)

Hydraulic Cycle Times	*Z-Bar*	*High-Lift*
Raise	5.9 sec.	5.9 sec.
Dump	1.4 sec.	1.4 sec.
Lower (float down)	2.8 sec.	2.8 sec.
Total	10.1 sec.	10.1 sec.

Turning Radius (measured to centerline of outside tire)	20 ft. 7 in. (6.28 m)

Dimensions with Standard Configuration

		Z-Bar *5.25-cu.-yd. (4.0 m^3) pin-on bucket*	*High-Lift* *5.25-cu.-yd. (4.0 m^3) pin-on bucket*
A	Height to Top of Cab and Canopy	11 ft. 6 in. (3.50 m)	11 ft. 6 in. (3.50 m)
B	Ground Clearance	18.2 in. (0.46 m)	18.2 in. (0.46 m)
C	Length from Centerline to Front Axle	5 ft. 7 in. (1.70 m)	5 ft. 7 in. (1.70 m)
D	Wheelbase	11 ft. 4 in. (3.46 m)	11 ft. 4 in. (3.46 m)
E	Dump Clearance	▲ (see page 30)	▲ (see page 30)
F	Height to Hinge Pin, Fully Raised	14 ft. 1 in. (4.28 m)	15 ft. 11 in. (4.80 m)
G	Dump Reach	▲▲ (see page 30)	▲▲ (see page 30)
H	Maximum Digging Depth	3.2 in. (80 mm)	8.4 in. (214 mm)
I	Overall Length	▲▲▲ (see page 30)	▲▲▲ (see page 30)
J	Maximum Rollback at Ground Level	40 deg.	41 deg.
K	Maximum Rollback, Boom Fully Raised	55 deg.	53 deg.
L	Maximum Bucket Angle, Fully Raised	49 deg.	39 deg.



744K Z-BAR AND HIGH-LIFT LOADERS

744K Z-Bar with Pin-On-Type Bucket

Bucket Type/Size	*General-Purpose with Bolt-On Edge*	*Light Material with Bolt-On Edge*
Capacity, Heaped	5.25 cu. yd. (4.0 m^3)	5.75 cu. yd. (4.4 m^3)
Capacity, Struck	4.5 cu. yd. (3.4 m^3)	5.0 cu. yd. (3.8 m^3)
Bucket Weight	5,549 lb. (2517 kg)	5,721 lb. (2595 kg)
Bucket Width	10 ft. 9 in. (3.27 m)	10 ft. 9 in. (3.27 m)
Breakout Force	42,805 lb. (19 416 kg)	40,292 lb. (18 276 kg)
Tipping Load, Straight	43,923 lb. (19 923 kg)	43,487 lb. (19 726 kg)
Tipping Load, 35-Deg. Full Turn	39,152 lb. (17 759 kg)	38,740 lb. (17 572 kg)
Tipping Load, 40-Deg. Full Turn	37,750 lb. (17 123 kg)	37,347 lb. (16 940 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	6 ft. 1 in. (1.85 m)	6 ft. 2 in. (1.88 m)
▲▲ Reach, 45-Deg. Dump, Full Height	4 ft. 0 in. (1.23 m)	4 ft. 3 in. (1.29 m)
▲ Dump Clearance, 45 Deg., Full Height	10 ft. 0 in. (3.04 m)	9 ft. 9 in. (2.98 m)
▲▲▲ Overall Length, Bucket on Ground	29 ft. 7 in. (9.01 m)	29 ft. 10 in. (9.09 m)
Loader Clearance Circle, Bucket Carry Position	47 ft. 2 in. (14.38 m)	47 ft. 4 in. (14.43 m)
Operating Weight	53,312 lb. (24 182 kg)	53,484 lb. (24 260 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

744K High-Lift with Pin-On-Type Bucket

Bucket Type/Size	*General-Purpose with Bolt-On Edge*
Capacity, Heaped	5.25 cu. yd. (4.0 m^3)
Capacity, Struck	4.5 cu. yd. (3.4 m^3)
Bucket Weight	5,549 lb. (2517 kg)
Bucket Width	10 ft. 9 in. (3.27 m)
Breakout Force	38,433 lb. (17 433 kg)
Tipping Load, Straight	34,784 lb. (15 778 kg)
Tipping Load, 35-Deg. Full Turn	30,830 lb. (13 984 kg)
Tipping Load, 40-Deg. Full Turn	29,669 lb. (13 458 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	7 ft. 11 in. (2.41 m)
▲▲ Reach, 45-Deg. Dump, Full Height	4 ft. 6 in. (1.38 m)
▲ Dump Clearance, 45 Deg., Full Height	11 ft. 10 in. (3.61 m)
▲▲▲ Overall Length, Bucket on Ground	31 ft. 8 in. (9.64 m)
Loader Clearance Circle, Bucket Carry Position	49 ft. 2 in. (14.98 m)
Operating Weight	54,527 lb. (24 733 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

Adjustments to Operating Weights and Tipping Loads with Buckets

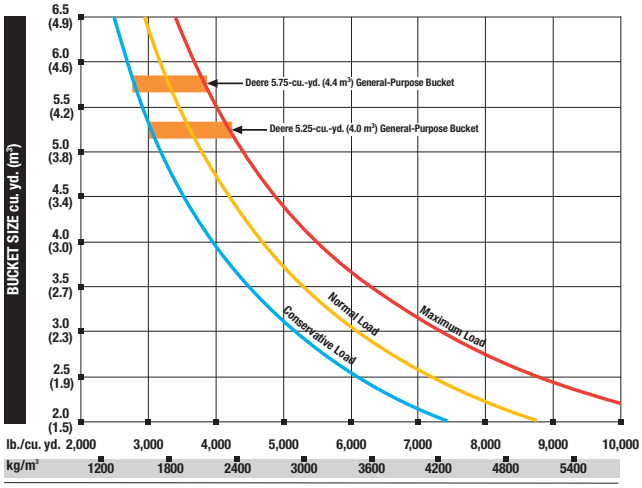
Adjustments to operating weights and tipping loads are based on Z-bar machine and pin-on 5.25-cu.-yd. (4.0 m^3) general-purpose bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator*

Add (+) or deduct (–) lb. (kg) as indicated for loaders with five-piece rims and	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 37-Deg. Full Turn, SAE*	*Tipping Load, 40-Deg. Full Turn, SAE*
26.5 R 25, 1 Star L-3	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)
26.5-25, 20 PR L-3	+ 587 lb. (+ 266 kg)	+ 440 lb. (+ 200 kg)	+ 399 lb. (181 kg)	+ 388 lb. (+ 176 kg)
26.5-25, 20 PR L-5§	+ 728 lb. (+ 330 kg)	+ 547 lb. (+ 248 kg)	+ 496 lb. (+ 225 kg)	+ 481 lb. (+ 218 kg)

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

§Requires 8-deg. rear axle stops, close-mounted steps, and no fenders.

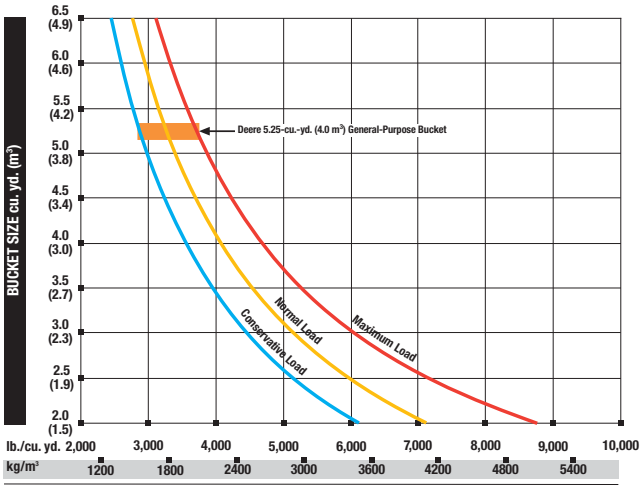
Bucket Selection Guides*



744K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.



744K HIGH-LIFT LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.

Specifications

Engine — 824K Z-BAR / HIGH-LIFT

Manufacturer and Model	John Deere PowerTech™ Plus 6135H
Non-Road Emission Standards	certified to EPA Tier 3 emissions
Cylinders	6
Valves Per Cylinder	4
Displacement	824 cu. in. (13.5 L)
Net Peak Power @ 1,600 rpm	333 hp (248 kW)
Net Peak Torque @ 900 rpm	1,194 lb.-ft. (1619 Nm)
Net Torque Rise	59%
Fuel System	mechanically actuated electronic unit injectors
Lubrication	full-flow spin-on filter and integral cooler
Aspiration	turbocharged, charge air cooled
Air Cleaner	dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 80-amp alternator (100-amp alternator optional)
Batteries (two 12 volt)	1,400 CCA (each)

Transmission

Type	countershaft-type PowerShift™
Torque Converter	single stage, dual phase with freewheeling stator
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–4th or 2nd–4th); quick-shift button with two selectable modes: kick-down or kick-up/down; and three clutch-cutoff settings adjustable on switch pad

	Standard 4-Speed Transmission		*5-Speed Transmission with Lockup Torque Converter*	
Travel Speeds (with 26.5 R 25, 1 Star L3 tires)	*Forward Maximum*	*Reverse Maximum*	*Forward Maximum*	*Reverse Maximum*
Gear 1	4.6 mph (7.4 km/h)	4.6 mph (7.4 km/h)	5.2 mph (8.3 km/h)	5.2 mph (8.3 km/h)
Gear 2	8.6 mph (13.8 km/h)	8.6 mph (13.8 km/h)	9.3 mph (14.9 km/h)	8.7 mph (14.0 km/h)
Gear 3	13.1 mph (21.0 km/h)	18.7 mph (30.1 km/h)	14.4 mph (23.1 km/h)	21.1 mph (33.9 km/h)
Gear 4	24.9 mph (40.0 km/h)	N/A	21.1 mph (33.9 km/h)	N/A
Gear 5	N/A	N/A	24.9 mph (40.0 km/h)	N/A

Axles/Brakes

Final Drives	heavy-duty inboard planetary
Differentials	hydraulic locking front with conventional rear — standard; dual locking front and rear — optional
Rear Axle Oscillation, Stop to Stop (with 26.5 R 25, 1 Star L3 tires)	26 deg.
Brakes (conform to ISO 3450)	
Service Brakes	hydraulically actuated, inboard, sun-gear mounted, pressure oil cooled, self adjusting, single disc
Parking Brake	automatic spring applied, hydraulically released, oil cooled, multi disc

Tires

Choice of (with Titan rims)*	*Tread Width*	*Width Over Tires*	*Change In Vertical Height*
26.5 R 25, 1 Star L-3	90.5 in. (2298 mm)	120.7 in. (3065 mm)	standard
26.5-25, 1 Star L-5, 20 ply§	90.5 in. (2298 mm)	120.5 in. (3060 mm)	+ 1.2 in. (+ 31 mm)
26.5-25, 20 PR L-3	90.5 in. (2298 mm)	120.5 in. (3060 mm)	+ 2.6 in. (+ 67 mm)

**Based on Z-bar machine configuration; may change based on vehicle configuration, weight, or tire-pressure adjustments.*

§Requires 8-deg. rear axle stops, close-mounted steps, and no fenders.

Refill Capacities (U.S.)

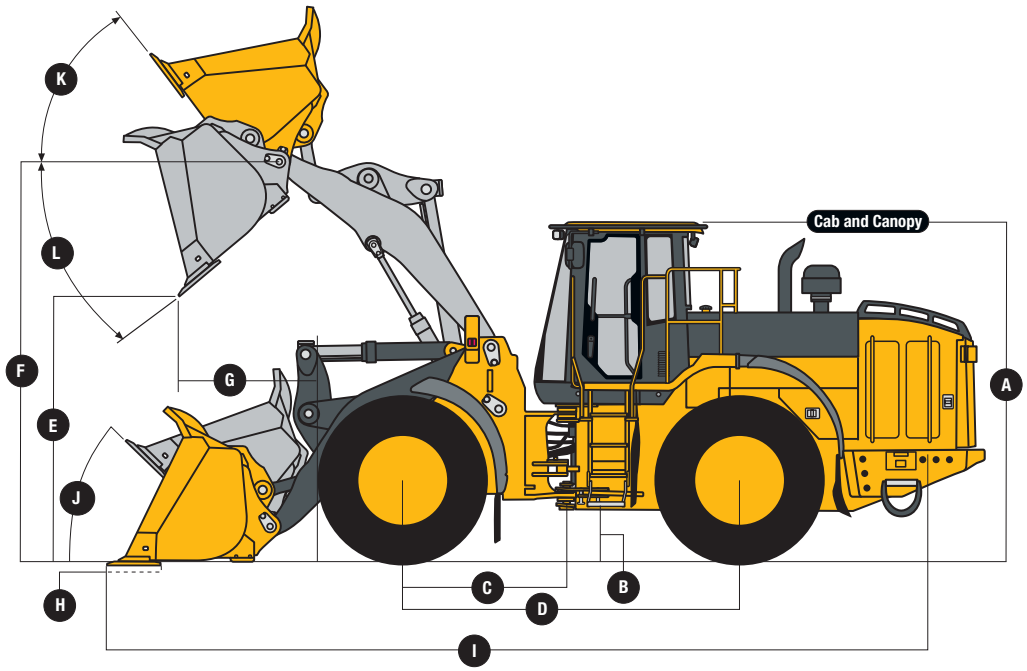
	824K Z-BAR / HIGH-LIFT
Fuel Tank (with ground-level fueling)	124 gal. (469.4 L)
Cooling System	50.1 qt. (47.4 L)
Engine Oil with Vertical Spin-On Filter	40 qt. (37.9 L)
Transmission Fluid with Vertical Filter	29.5 qt. (27.9 L)
Axle Oil (front and rear)	48.5 qt. (45.9 L)
Hydraulic Reservoir and Filters	42 gal. (159 L)
Park Brake Oil (wet disc)	24 oz. (0.7 L)

Hydraulic System/Steering

Pump (loader and steering)	two variable-displacement, load-sensing, axial-piston pumps; closed-center system	
Maximum Rated Flow @ 1,000 psi (6895 kPa) and 2,250 rpm	136 gpm (513 L/m)	
System Relief Pressure (loader and steering)	3,650 psi (25 166 kPa)	
Loader Controls	two-function valve; single- or dual-lever controls; control lever lockout feature; optional third- and fourth-function valve with auxiliary lever	
Steering (conforms to ISO 5010)		
Type	power, fully hydraulic	
Articulation Angle	80-deg. arc (40 deg. each direction)	
Hydraulic Cycle Times	***Z-Bar***	***High-Lift***
Raise	5.9 sec.	5.9 sec.
Dump	1.3 sec.	1.3 sec.
Lower (float down)	2.5 sec.	2.6 sec.
Total	9.7 sec.	9.8 sec.
Turning Radius (measured to centerline of outside tire)	19 ft. 5 in. (5.92 m)	

Dimensions with Standard Configuration

		Z-Bar *6.0-cu.-yd. (4.6 m^3) pin-on bucket*	***High-Lift*** *6.0-cu.-yd. (4.6 m^3) pin-on bucket*
A	Height to Top of Cab and Canopy	11 ft. 6 in. (3.50 m)	11 ft. 6 in. (3.50 m)
B	Ground Clearance	18.2 in. (0.46 m)	18.2 in. (0.46 m)
C	Length from Centerline to Front Axle	5 ft. 7 in. (1.70 m)	5 ft. 7 in. (1.70 m)
D	Wheelbase	11 ft. 4 in. (3.46 m)	11 ft. 4 in. (3.46 m)
E	Dump Clearance	▲ (see page 34)	▲ (see page 34)
F	Height to Hinge Pin, Fully Raised	14 ft. 9 in. (4.48 m)	15 ft. 11 in. (4.85 m)
G	Dump Reach	▲▲ (see page 34)	▲▲ (see page 34)
H	Maximum Digging Depth	4.5 in. (115 mm)	7.7 in. (196 mm)
I	Overall Length	▲▲▲ (see page 34)	▲▲▲ (see page 34)
J	Maximum Rollback at Ground Level	46 deg.	46 deg.
K	Maximum Rollback, Boom Fully Raised	52 deg.	53 deg.
L	Maximum Bucket Angle, Fully Raised	44 deg.	40 deg.



824K Z-BAR AND HIGH-LIFT LOADERS

824K Z-Bar with Pin-On-Type Bucket

	Bucket Type/Size	*General-Purpose with Bolt-On Edge*	*Light Material with Bolt-On Edge*
	Capacity, Heaped	6.0 cu. yd. (4.6 m^3)	6.75 cu. yd. (5.2 m^3)
	Capacity, Struck	5.25 cu. yd. (4.0 m^3)	5.8 cu. yd. (4.4 m^3)
	Bucket Weight	6,146 lb. (2788 kg)	6,411 lb. (2908 kg)
	Bucket Width	10 ft. 9 in. (3.27 m)	10 ft. 9 in. (3.27 m)
	Breakout Force	41,678 lb. (18 905 kg)	38,572 lb. (17 496 kg)
	Tipping Load, Straight	45,213 lb. (20 508 kg)	44,590 lb. (20 226 kg)
	Tipping Load, 35-Deg. Full Turn	40,236 lb. (18 251 kg)	39,649 lb. (17 984 kg)
	Tipping Load, 40-Deg. Full Turn	38,775 lb. (17 588 kg)	38,195 lb. (17 325 kg)
	Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	6 ft. 9 in. (2.05 m)	6 ft. 10 in. (2.09 m)
▲▲	Reach, Max. Dump, Full Height	4 ft. 2 in. (1.28 m)	4 ft. 6 in. (1.36 m)
▲	Dump Clearance, Max. Dump, Full Height	10 ft. 6 in. (3.19 m)	10 ft. 3 in. (3.12 m)
▲▲▲	Overall Length, Bucket on Ground	30 ft. 5 in. (9.26 m)	30 ft. 9 in. (9.38 m)
	Loader Clearance Circle, Bucket Carry Position	46 ft. 9 in. (14.26 m)	46 ft. 8 in. (14.22 m)
	Operating Weight	57,783 lb. (26 210 kg)	58,047 lb. (26 330 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

824K High-Lift with Pin-On-Type Bucket

	Bucket Type/Size	*General-Purpose with Bolt-On Edge*	*General-Purpose with Teeth and Segments*
	Capacity, Heaped	6.0 cu. yd. (4.6 m^3)	6.0 cu. yd. (4.6 m^3)
	Capacity, Struck	5.25 cu. yd. (4.0 m^3)	5.25 cu. yd. (4.0 m^3)
	Bucket Weight	6,146 lb. (2788 kg)	6,423 lb. (2914 kg)
	Bucket Width	10 ft. 9 in. (3.27 m)	10 ft. 9 in. (3.27 m)
	Breakout Force	39,570 lb. (17 949 kg)	39,570 lb. (17 949 kg)
	Tipping Load, Straight	37,983 lb. (17 229 kg)	37,626 lb. (17 067 kg)
	Tipping Load, 35-Deg. Full Turn	33,658 lb. (15 267 kg)	33,296 lb. (15 103 kg)
	Tipping Load, 40-Deg. Full Turn	32,386 lb. (14 690 kg)	32,027 lb. (14 527 kg)
	Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	8 ft. 2 in. (2.50 m)	8 ft. 5 in. (2.58 m)
▲▲	Reach, Max. Dump, Full Height	5 ft. 4 in. (1.63 m)	5 ft. 10 in. (1.77 m)
▲	Dump Clearance, Max. Dump, Full Height	11 ft. 11 in. (3.63 m)	11 ft. 7 in. (3.52 m)
▲▲▲	Overall Length, Bucket on Ground	32 ft. 1 in. (9.77 m)	32 ft. 8 in. (9.95 m)
	Loader Clearance Circle, Bucket Carry Position	47 ft. 9 in. (14.54 m)	48 ft. 1 in. (14.65 m)
	Operating Weight	58,618 lb. (25 689 kg)	58,894 lb. (26 714 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

Adjustments to Operating Weights and Tipping Loads with Buckets

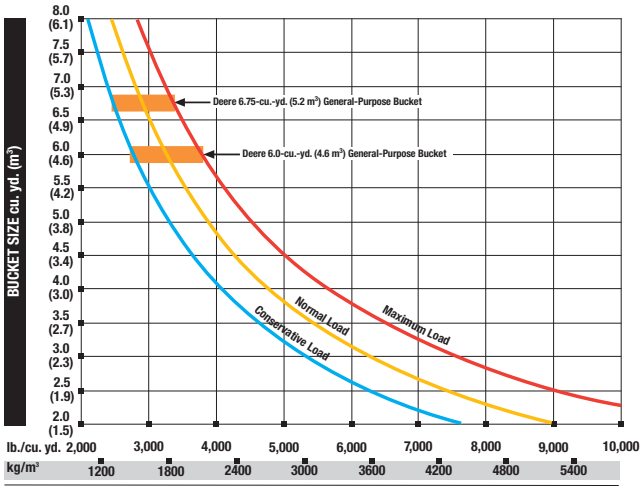
Adjustments to operating weights and tipping loads are based on Z-bar machine and pin-on 6.0-cu.-yd. (4.6 m^3) general-purpose bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator*

Add (+) or deduct (–) lb. (kg) as indicated for loaders with Titan rims and	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 37-Deg. Full Turn, SAE*	*Tipping Load, 40-Deg. Full Turn, SAE*
26.5 R 25, 1 Star L-3	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)
26.5-25, 1 Star L-5, 20 ply§	+ 688 lb. (+ 312 kg)	+ 489 lb. (+ 222 kg)	+ 448 lb. (+ 203 kg)	+ 432 lb. (+ 196 kg)
26.5-25, 20 PR L-3	+ 547 lb. (+ 248 kg)	+ 390 lb. (+ 177 kg)	+ 355 lb. (+ 161 kg)	+ 343 lb. (+ 156 kg)

**Based on Z-bar machine configuration; may change based on vehicle configuration, weight, or tire-pressure adjustments.*

§Requires 8-deg. rear axle stops, close-mounted steps, and no fenders.

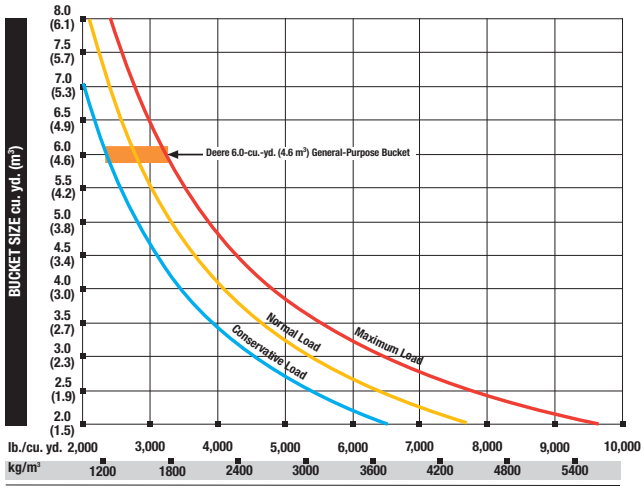
Bucket Selection Guides*



824K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.



824K HIGH-LIFT LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.

Specifications

Engine

	844K Z-BAR
Manufacturer and Model	John Deere PowerTech™ Plus 6135H
Non-Road Emission Standards	certified to EPA Tier 3 emissions
Cylinders	6
Valves Per Cylinder	4
Displacement	824 cu. in. (13.5 L)
Net Peak Power @ 1,600 rpm	380 hp (283 kW)
Net Peak Torque @ 900 rpm	1,323 lb.-ft. (1793 Nm)
Net Torque Rise	44%
Fuel System	mechanically actuated electronic unit injectors
Lubrication	full-flow spin-on filter and integral cooler
Aspiration	turbocharged, charge air cooled
Air Cleaner	dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 80-amp alternator (100-amp alternator optional)
Batteries (two 12 volt)	1,400 CCA (each)

Transmission

Type	countershaft-type PowerShift™
Torque Converter	single stage, dual phase with freewheeling stator
Shift Control	electronically modulated, adaptive, load and speed dependent
Operator Interface	steering-column or joystick-mounted F-N-R and gear-select lever; kick-down button on hydraulic lever
Shift Modes	manual/auto (1st–4th or 2nd–4th); quick-shift button with two selectable modes: kick-down or kick-up/down; and three clutch-cutoff settings adjustable on switch pad

	Standard 4-Speed Transmission		*5-Speed Transmission with Lockup Torque Converter*	
Travel Speeds (with 29.5 R 25, 1 Star L3 tires)	*Forward Maximum*	*Reverse Maximum*	*Forward Maximum*	*Reverse Maximum*
Gear 1	4.1 mph (6.6 km/h)	4.1 mph (6.6 km/h)	4.9 mph (7.9 km/h)	4.9 mph (7.9 km/h)
Gear 2	7.6 mph (12.2 km/h)	7.6 mph (12.2 km/h)	8.4 mph (13.5 km/h)	8.1 mph (13.1 km/h)
Gear 3	11.7 mph (18.8 km/h)	17.0 mph (27.3 km/h)	13.0 mph (20.9 km/h)	19.1 mph (30.7 km/h)
Gear 4	25.2 mph (40.5 km/h)	N/A	19.1 mph (30.7 km/h)	N/A
Gear 5	N/A	N/A	24.9 mph (40.0 km/h)	N/A

Axles/Brakes

Final Drives	heavy-duty outboard planetary
Differentials	conventional front and rear — standard; limited-slip front and rear — optional
Rear Axle Oscillation, Stop to Stop (with 29.5 R 25, 1 Star L3 tires)	26 deg.
Brakes (conform to ISO 3450)	
Service Brakes	outboard, forced oil cooled, multi disc
Parking Brake	automatic spring applied, hydraulically released, sealed wet multi disc

Tires

Choice of (with three-piece rims)*	*Tread Width*	*Width Over Tires*	*Change In Vertical Height*
29.5 R 25, 1 Star L-3	96.1 in. (2440 mm)	125.8 in. (3194 mm)	standard
29.5 R 25, 1 Star L-3, 28 ply	96.1 in. (2440 mm)	126.4 in. (3210 mm)	– 0.1 in. (– 3 mm)
29.5 R 25, 1 Star L-5†	96.1 in. (2440 mm)	126.3 in. (3208 mm)	+ 1.5 in. (+ 39 mm)

**Based on Z-bar machine configuration; may change based on vehicle configuration, weight, or tire-pressure adjustments.*

†74,000-lb. ROPS limit must not be exceeded.

Refill Capacities (U.S.)

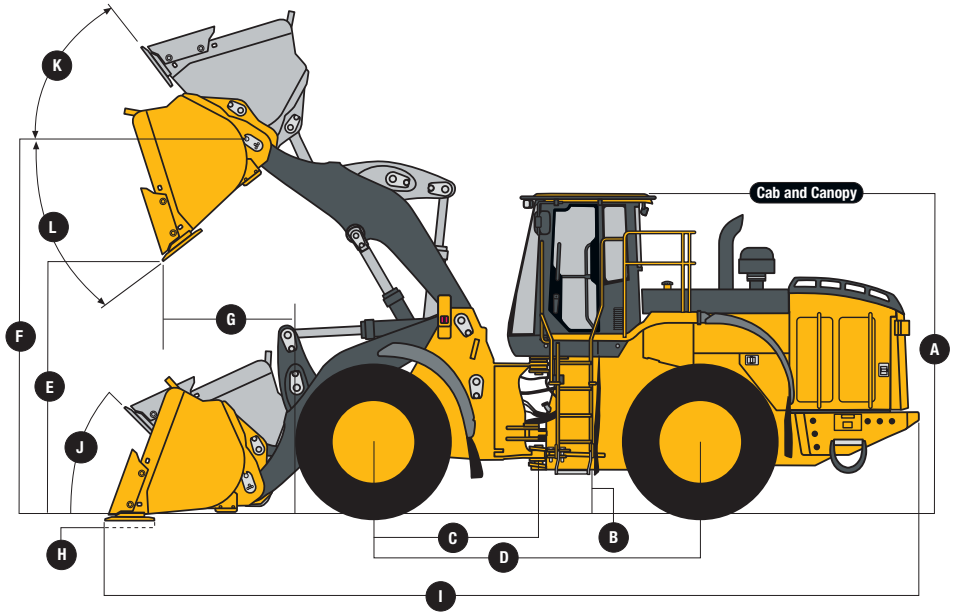
	844K Z-BAR
Fuel Tank (with ground-level fueling)	146 gal. (553 L)
Cooling System	55 qt. (52 L)
Engine Oil with Vertical Spin-On Filter	40 qt. (38 L)
Transmission Fluid with Vertical Filter	48 qt. (45.4 L)
Axle Oil	
Front	58 qt. (55 L)
Rear	62 qt. (59 L)
Hydraulic Reservoir and Filters	64.5 gal. (244 L)
Park Brake Oil (wet disc)	24 oz. (0.7 L)

Hydraulic System/Steering

Pump (loader and steering)	two variable-displacement, load-sensing, axial-piston pumps; closed-center system
Maximum Rated Flow @ 1,000 psi (6895 kPa) and 2,250 rpm	164 gpm (621 L/m)
System Relief Pressure (loader and steering)	3,500 psi (24 132 kPa)
Loader Controls	two-function valve; single- or dual-lever controls; control lever lockout feature; optional third- and fourth-function valve with auxiliary levers
Steering (conforms to ISO 5010)	
Type	power, fully hydraulic; single-lever control and adjustable wristrest with conventional steering wheel override
Articulation Angle	80-deg. arc (40 deg. each direction)
Hydraulic Cycle Times	***Z-Bar***
Raise	5.9 sec. @ 2,250 rpm
Dump	1.9 sec.
Lower (float down)	3.5 sec.
Total	11.3 sec.
Turning Radius (measured to centerline of outside tire)	20 ft. 8 in. (6.30 m)

Dimensions with Standard Configuration

		Z-Bar *7.25-cu.-yd. (5.5 m^3) pin-on bucket*
A	Height to Top of Cab and Canopy	12 ft. 4 in. (3.76 m)
B	Ground Clearance	18.2 in. (0.46 m)
C	Length from Centerline to Front Axle	6 ft. 1 in. (1.85 m)
D	Wheelbase	12 ft. 2 in. (3.70 m)
E	Dump Clearance	▲ (see page 38)
F	Height to Hinge Pin, Fully Raised	15 ft. 2 in. (4.62 m)
G	Dump Reach	▲▲ (see page 38)
H	Maximum Digging Depth	3.7 in. (93 mm)
I	Overall Length	▲▲▲ (see page 38)
J	Maximum Rollback at Ground Level	41 deg.
K	Maximum Rollback, Boom Fully Raised	56 deg.
L	Maximum Bucket Angle, Fully Raised	55 deg.



844K Z-BAR LOADER

844K Z-Bar with Pin-On-Type Bucket

Bucket Type/Size	*General-Purpose with Bolt-On Edge and Wear Inserts*	*General-Purpose with Bolt-On Edge, without Wear inserts*	*Light Material with Bolt-On Edge and Optional Spillguard, without Wear Inserts**	*Light Material with Bolt-On Edge, Optional Spillguard, and Wear Inserts**	*Spade-Nose Rock with Teeth, Segments, Spillguard, and Wear Inserts*	*Spade-Nose Rock with Bolt-On Edge, Spillguard, and Wear inserts*
Capacity, Heaped	7.25 cu. yd. (5.5 m^3)	7.25 cu. yd. (5.5 m^3)	8.1 cu. yd. (6.2 m^3)	8.1 cu. yd. (6.2 m^3)	6.25 cu. yd. (4.6 m^3)	6.25 cu. yd. (4.6 m^3)
Capacity, Struck	6.2 cu. yd. (4.7 m^3)	6.2 cu. yd. (4.7 m^3)	7.3 cu. yd. (5.6 m^3)	7.3 cu. yd. (5.6 m^3)	5.4 cu. yd. (4.1 m^3)	5.4 cu. yd. (4.1 m^3)
Bucket Weight	8,288 lb. (3759 kg)	7,748 lb. (3515 kg)	8,247 lb. (3741 kg)	8,813 lb. (3998 kg)	9,392 lb. (4260 kg)	9,092 lb. (4124 kg)
Bucket Width	11 ft. 4 in. (3.46 m)	11 ft. 4 in. (3.46 m)	11 ft. 4 in. (3.46 m)	11 ft. 4 in. (3.46 m)	11 ft. 6 in. (3.49 m)	11 ft. 6 in. (3.49 m)
Breakout Force	47,860 lb. (21 709 kg)	47,860 lb. (21 709 kg)	45,539 lb. (20 656 kg)	45,539 lb. (20 656 kg)	42,576 lb. (19 312 kg)	43,482 lb. (19 723 kg)
Tipping Load, Straight	51,488 lb. (23 355 kg)	52,064 lb. (23 616 kg)	51,888 lb. (23 536 kg)	51,272 lb. (23 256 kg)	50,594 lb. (22 949 kg)	51,019 lb. (23 142 kg)
Tipping Load, 37-Deg. Full Turn	45,160 lb. (20 484 kg)	45,737 lb. (20 746 kg)	45,524 lb. (20 649 kg)	44,908 lb. (20 370 kg)	44,205 lb. (20 051 kg)	44,633 lb. (20 245 kg)
Tipping Load, 40-Deg. Full Turn	44,136 lb. (20 020 kg)	44,713 lb. (20 282 kg)	44,494 lb. (20 182 kg)	43,876 lb. (19 902 kg)	43,173 lb. (19 583 kg)	43,599 lb. (19 776 kg)
Reach, 45-Deg. Dump, 7-ft. (2.13 m) Clearance	7 ft. 6 in. (2.28 m)	7 ft. 6 in. (2.28 m)	7 ft. 7 in. (2.31 m)	7 ft. 7 in. (2.31 m)	8 ft. 1 in. (2.47 m)	7 ft. 10 in. (2.38 m)
▲▲ Reach, 45-Deg. Dump, Full Height	4 ft. 11 in. (1.49 m)	4 ft. 11 in. (1.49 m)	5 ft. 1 in. (1.54 m)	5 ft. 1 in. (1.54 m)	5 ft. 11 in. (1.80 m)	5 ft. 4 in. (1.64 m)
▲ Dump Clearance, 45 Deg., Full Height	10 ft. 11 in. (3.32 m)	10 ft. 11 in. (3.32 m)	10 ft. 9 in. (3.27 m)	10 ft. 9 in. (3.27 m)	10 ft. 0 in. (3.05 m)	10 ft. 6 in. (3.21 m)
▲▲▲ Overall Length, Bucket on Ground	31 ft. 8 in. (9.65 m)	31 ft. 8 in. (9.65 m)	31 ft. 11 in. (9.72 m)	31 ft. 11 in. (9.72 m)	33 ft. 0 in. (10.06 m)	32 ft. 3 in. (9.83 m)
Loader Clearance Circle, Bucket Carry Position	49 ft. 5 in. (15.06 m)	49 ft. 5 in. (15.06 m)	49 ft. 7 in. (15.11 m)	49 ft. 7 in. (15.11 m)	49 ft. 6 in. (15.10 m)	49 ft. 2 in. (14.98 m)
Operating Weight	70,629 lb. (32 037 kg)	70,089 lb. (31 792 kg)	70,590 lb. (32 019 kg)	71,156 lb. (32 276 kg)	71,734 lb. (32 538 kg)	71,434 lb. (32 402 kg)

Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

**Spillguard adds approximately 0.3 cu. yd. to bucket rating.*

Adjustments to Operating Weights and Tipping Loads with Buckets

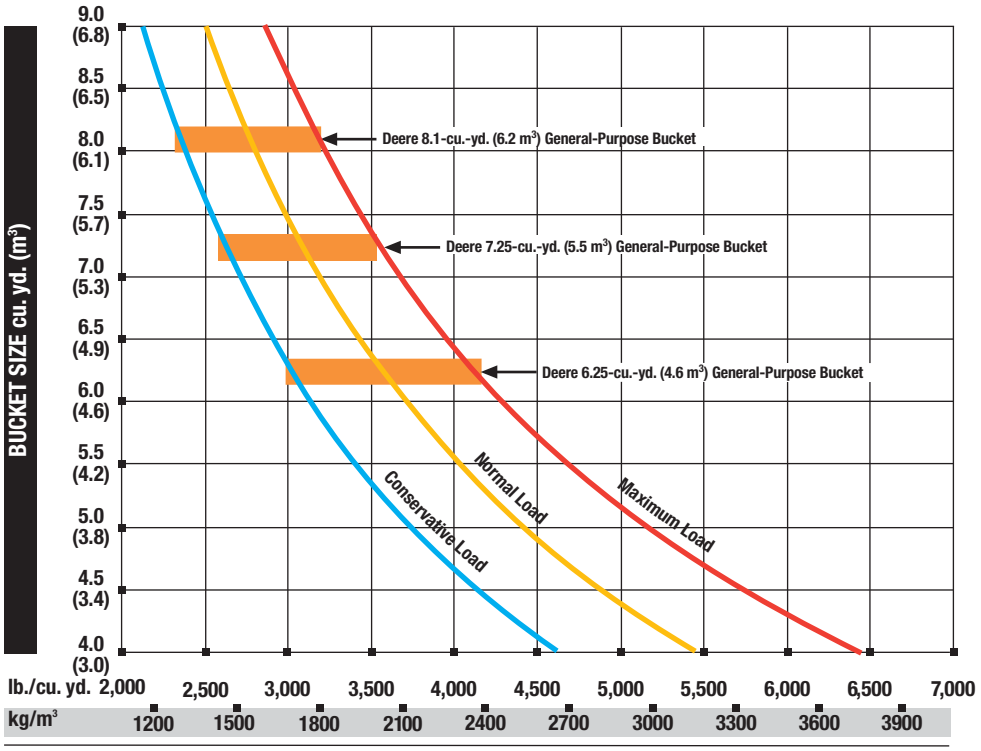
Adjustments to operating weights and tipping loads are based on Z-bar machine and pin-on 7.25-cu.-yd. (5.5 m^3) general-purpose bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator*

Add (+) or deduct (–) lb. (kg) as indicated for loaders with three-piece rims and	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 37-Deg. Full Turn, SAE*	*Tipping Load, 40-Deg. Full Turn, SAE*
29.5 R 25, 1 Star L-3	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)
29.5 R 25, 1 Star L-3, 28 ply	+ 1,103 lb. (+ 500 kg)	+ 812 lb. (+ 368 kg)	+ 730 lb. (+ 331 kg)	+ 717 lb. (+ 325 kg)
29.5 R 25, 1 Star L-5†	+ 1,972 lb. (+ 894 kg)	+ 248 lb. (+ 113 kg)	+ 56 lb. (+ 26 kg)	+ 68 lb. (+ 31 kg)

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

†74,000-lb. ROPS limit must not be exceeded.

Bucket Selection Guide*



844K LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	lb./cu. yd.	kg/m³
Chips, pulpwood	486	288
Cinders (coal, ashes, clinkers)	1,134	673
Clay and gravel, dry	2,700	1602
Clay, compact, solid	2,943	1746
Clay, dry in lump loose	1,701	1009
Clay, excavated in water	2,160	1282
Coal, anthracite, broken, loose	1,458	865
Coal, bituminous, moderately wet	1,350	801
Earth, common loam, dry	2,052	1218
Earth, mud, packed	3,105	1843
Granite, broken	2,592	1538
Gypsum	3,834	2275
Limestone, coarse, sized	2,646	1570
Limestone, mixed sizes	2,835	1682
Limestone, pulverized or crushed	2,295	1362
Sand, damp	3,510	2083
Sand, dry	2,970	1762
Sand, voids, full of water	3,510	2083
Sandstone, quarried	2,214	1314
Shale, broken crushed	2,295	1362
Slag, furnace granulated	3,294	1955
Stone or gravel, 1-1/2" to 3-1/2" size	2,430	1442
Stone or gravel, 3/4" size	2,700	1602

* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The “conservative load” line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The “maximum load” condition on this guide is sometimes utilized when operating on firm ground and level surfaces.

644K / 724K / 744K / 824K / 844K LOADERS

Key: ● Standard equipment ▲ Optional equipment

See your John Deere dealer for further information.

644	724	744	824	844	Engine
●	●	●	●	●	Wet-sleeve cylinder liners
●					Automatic glow plugs for cold start
●	●	●	●	●	Programmable auto-idle and auto shutdown
●	●	●	●	●	Selected idle adjustment from 900–1,250 rpm
●	●	●	●	●	Starter protection
●	●	●	●	●	Automatic derating for exceeded system temperatures
●	●	●	●	●	Serpentine drive belt for automatic tensioner
	●	●	●	●	Electrical fuel-priming pump
●	●	●			Under-hood prescreened air intake
●	●	●	●	●	Dual-stage fuel filter and water separator
●	●	●	●	●	500-hour vertical spin-on oil filter
●	●	●	●	●	Engine-compartment light
▲	▲	▲	▲	▲	Chrome exhaust stack
	▲	▲	▲	▲	Automatic ether starting aid (recommended for cold starts below 10 deg. F [–12 deg. C])
▲	▲	▲	▲	▲	Engine-block heater (recommended for cold starts below –10 deg. F [–23 deg. C])
▲	▲	▲	●	●	Centrifugal engine air pre-cleaner
					Powertrain
●	●	●	●	●	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
▲	▲	▲	▲	▲	Five-speed transmission with lockup torque converter
▲	▲	▲	▲		Automatic differential lock
		▲			Wide, heavy-duty axles (increases tread width 4 in.)
▲	●	●	●	●	Wheel-spin control
					Quad-Cool™ Cooling System ***[new for 724K–824K]***
●	●	●	●	●	Heavy-duty, trash-resistant radiator and high-ambient cooling package
●	●	●	●	●	Two-side access to all coolers
●	●	●	●	●	Isolated from engine compartment
●	●	●	●	●	Engine radiator
●	●	●	●	●	Integral engine oil cooler
●	●	●	●	●	Hydraulic oil cooler (oil to air)
●	●	●	●	●	Transmission oil cooler (oil to air)
●	●	●	●	●	Charge air cooler (air to air)
●	●	●	●	●	Coolant recovery tank
●	●	●	●	●	Antifreeze, –34 deg. F (–37 deg. C)
●	●	●	●	●	Cool-on-demand swing-out fan
●	●	●	●	●	Enclosed fan safety guard
▲	▲	▲	▲	●	Automatic reversing fan drive
▲	▲	●	●	●	Axle coolers
▲	▲	▲	▲	▲	Harsh environmental coolers
					Hydraulics
●	▲	▲	▲		Two function — joystick with F-N-R
●	●	●	●	●	Automatic return to dig
●				●	In-cab adjustable automatic return to dig (Powerllel™ and 844K only)
●	●	●	●	●	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
▲	▲	▲	▲	▲	Two function — joystick with steering column F-N-R
▲	●	●	●	●	Two function — two-lever fingertip controls and steering column F-N-R
▲	▲	▲	▲		Three function — joystick with F-N-R and third-function auxiliary lever
▲	▲	▲	▲	▲	Three function — joystick with steering column F-N-R and third-function auxiliary lever
▲	▲	▲	▲	▲	Three function — three-lever fingertip controls and steering column F-N-R
▲	▲				Four function — four-lever fingertip controls and steering column F-N-R
▲	●	●	●	●	Ride control, automatic with monitor-adjustable speed settings

644	724	744	824	844	Hydraulics *(continued)*
▲	▲	▲	▲	▲	Hydraulic control system for quick-coupler locking pins
					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
	●	●	●	●	Electric fuel priming pump with switch
●	●	●	●	●	Pre-wired for beacon/strobe light
●	●	●	●	●	Lights: Halogen driving lights with guards (2) / Front (4) and rear (2) cab work lights (644K and 724K) / Front (4), rear cab (2), and rear grille (2) work lights (744K, 824K, and 844K) / Turn signals and flashers (644K, 724K, 744K, and 824K) / LED stop- and taillights
●	●	●	●	●	Horn, electric
●	●	●	●	●	Reverse warning alarm
●	●	●	●	●	Multi-function/multi-language 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, speedometer, odometer, and outside temperature)
●	●	●	●	●	Integrated cycle counter with five categories
●	●	●	●	●	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
●	●	●	●	●	Menu display: Codes / Machine settings / Diagnostics / Monitor settings / Clock
▲	▲	▲	▲	●	Heavy-duty LED turn signal and marker lights
▲	▲	▲	▲	▲	Electrical corrosion-prevention package
▲	▲	▲	▲	▲	AM/FM/WB radio
▲	▲	▲	▲	▲	AM/FM/WB radio with CD player
▲	●	●	●	●	24- to 12-volt, 10-amp converter
					Operator's Station
●					Canopy with ROPS/FOPS, isolation mounted
●	●	●	●	●	Key-less start with multiple security modes
●	●	●	●	●	Sealed-switch module with function indicators
●					Seat with backrest extension, deep foam, vinyl cover, and adjustable air suspension
●	●	●	●	●	Hydraulic controls integrated to seat
●	●	●	●	●	Seat belt, 3 in. (76 mm), with retractor
●	●	●	●	●	Cup holders (2)
●	●	●	●	●	Lunch-box/cooler holder
●	●	●	●	●	Dome and reading light
▲	●	●	●	●	12-volt power port
●	●	●	●	●	Rubber floor mat
●	●	●	●	●	Tilt steering column
●	●	●	●	●	Operator's manual storage compartment
●	●				Outside (2) and inside (1) rearview mirrors
		●	●	●	Outside (2) and inside (2) rearview mirrors
●	●	●	●		Left-side operator-station access
●	●	●	●	●	Slip-resistant steps and ergonomic handholds
▲					Quiet cab with heater
▲	●	●	●	●	Quiet cab with air conditioning/heater
	●	●	●	●	Sun visor
	●	●	●	●	Radio ready
	●	●	●	●	Front and rear intermittent windshield wiper and washers
▲	▲	▲	▲	●	Premium seat with high-wide back and headrest extension, heated, leather/fabric cover, and adjustable air suspension

644	724	744	824	844	Operator's Station *(continued)*
▲	●	●	●		Seat with backrest extension, deep foam, fabric cover, and adjustable air suspension
▲	▲	▲	▲	▲	Powered cab air pre-cleaner
▲	▲	▲	▲	▲	Large heated outside mirrors
▲	▲	▲	▲	▲	Beacon bracket
▲	▲	▲	▲	▲	Rear camera and radar object-detection system
▲	▲	▲	▲	▲	Embedded payload scale
▲	▲	▲	▲	▲	Fire extinguisher
▲					ROPS canopy rear window
					Loader Linkage
●	●	●	●	●	Z-bar loader linkage
▲					Powerllel linkage for visibility and parallel-lift
▲	▲	▲	▲		High-lift Z-bar loader linkage
					Buckets and Attachments
●	●	●	●	●	Full line of Deere pin-on buckets
▲					Hi-vis hydraulic coupler which accepts Euro-pattern attachments (Volvo)
▲					Full line of Deere hook-on buckets and forks
		▲	▲	▲	Bolt-on bucket spill guard
▲					Bolt-on fork frame guard
					Overall Vehicle
●	●	●	●	●	JDLink™ Ultimate wireless communication system
●	●	●	●		NeverGrease™ rear-axle oscillation
●	●	●	●	●	NeverGrease steering-cylinder joints
				●	Bushed pin joints (including static joints on bucket and steering cylinders)
				●	Bushed steering cylinder pin joints on loader frame
●	●	●	●	●	Front and rear tie-downs (844K includes mid tie-downs)
●	●	●	●	●	Rear cast bumper with rear hitch and locking pin
●	●	●	●	●	Articulation locking bar
●	●	●	●		Loader boom service locking bar
●	●	●	●	●	40-degree steering articulation to each side with rubber-cushion stops on frame
●	●	●	●	●	Vandal protection with lockable engine enclosures, right counterweight storage, battery box, and filler access for radiator/fuel/hydraulic transmission
	●	●	●	●	Right and left handrails, platforms, and steps
●	●	●	●	●	Service steps and handholds
●	●	●	●	●	Storage compartment
●	●	●	●	●	Fuel-tank fill strainer
●	●	●	●	●	Heavy-duty fuel-tank guard
●	●	●	●	●	Ground-level fueling
●	●	●	●	●	Same-side ground-level daily servicing
●	●	●	●	●	Environmental drains for engine, transmission, hydraulic oils, and engine coolant
●	●	●	●	●	Fluid-sampling ports for engine, transmission, hydraulic and axle oils, and engine coolant
●	●				23.5R25 L3 radial tires on three-piece rims
		●	●		26.5R25 L3 radial tires on three-piece rims
			▲	●	29.5R25 L3 radial tires on three-piece rims
▲	▲	▲			Waste handler (Z-bar and High-Lift)
▲	▲	▲	▲	▲	NeverGrease linkage (Z-bar and High-Lift)
▲	▲	▲	●	●	Transmission side-frame and bottom guards with Level 2 sound package
▲	▲	▲	▲	▲	Fast-fuel system
▲	▲	▲	▲	▲	Quick fluid service (engine, transmission, hydraulic oils, and engine coolant)
▲	▲	▲	▲	▲	Fenders, full-coverage, front
▲	▲	▲	▲	▲	Fenders, full-coverage, front and rear
▲					Close-mounted steps
▲	▲	▲			Less wheels and tires with axle stops
▲	▲	▲			Rims less tires
▲	▲	●	●	●	Lift eyes
▲	▲	▲	▲	▲	License-plate bracket and light
▲					Forestry-application package (Powerllel only)
▲	▲	▲	▲		Special guarding for waste and forestry applications

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions per ISO9249. No derating is required up to 10,000-ft. (3050 m) altitude.

Specifications and design subject to change without notice. Specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on units with applicable linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb. (79 kg) operator.

SAFETY live with it

JOHN DEERE

DKAKPLDR Litho in U.S.A. (09-05)