724K/744K/824K/844K-II LOADERS

197–283 kW (264–380 hp)

JOHN DEERE

Courtesy of Machine.Market

Think. Big.

Serious productivity demands serious thinking. Many of the numerous advantages of 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 equipped these productive material movers with spacious cabs, innovative low-maintenance cooling systems, fatigue-beating ergonomics, and even more options. All with the goal of increasing productivity and uptime, while lowering daily operating costs. Owners, operators, and maintenance personnel will benefit from the big ideas found in the 724K, 744K, 824K, and 844K Series-II Loaders. To learn how, read on. Then talk to your John Deere dealer.

Courtesy of Machine.Market

The EPA Interim Tier 4 (IT4)/EU Stage IIIB technology utilized in our K-Series diesel engines is fuel efficient, fully integrated, and fully supported.

Torque reserves are impressive, topping out at a whopping 61 percent in the 724K. 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.

With John Deere WorkSight™, JDLink™ monitoring provides real-time machine utilization and health data, plus location info. Fleet Care proactively suggests maintenance to correct problems early before they cause costly downtime. Service ADVISOR™ Remote enables your dealer to read diagnostic codes, record performance data, and even update software without a trip to your jobsite. And integrated payload weighing delivers load data. It's the most comprehensive, easy-to-use suite of technology available for increasing uptime and productivity while lowering operating costs.

K-Series Specifications

	724K	744K	824K	844K-II
Net Peak Power	197 kW (264 hp)	227 kW (304 hp)	248 kW (333 hp)	283 kW (380 hp)
Bucket Capacity	3.6 m^3 (4.75 cu. yd.)	4.0 m^3 (5.25 cu. yd.)	4.6 m^3 (6.0 cu. yd.)	5.5 m^3 (7.25 cu. yd.)
Z-Bar:				
Tipping Load 40-degree full turn	14 132 kg (31,155 lb.)	16 946 kg (37,360 lb.)	17 481 kg (38,538 lb.)	22 094 kg (48,708 lb.)
Breakout Force	14 398 kg (31,742 lb.)	19 416 kg (42,805 lb.)	18 718 kg (41,266 lb.)	21 674 kg (47,782 lb.)
Operating Weight	19 264 kg (42,470 lb.)	24 346 kg (53,674 lb.)	26 501 kg (58,425 lb.)	34 152 kg (75,292 lb.)

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 quiet and spacious cab boasts generous legroom and exceptional ergonomics including fatigue-beating features like seat-mounted loader controls. And an expanded sealed-switch module with keyless start and easy push-button operation of even more functions.

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 are conveniently positioned, allowing plenty of legroom and easy entrance and exit.

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 items. Convenient 12-volt port powers cell phones and other electronic devices.

Cab interior is noticeably quiet to help reduce operator fatigue.

Front and rear work lights stay on for up to three minutes after the engine is shut down, illuminating the way for an easier exit.

Courtesy of Machine Market

1. Spacious front glass, low-profile console, and large side and rear windows allow unsurpassed 360-degree visibility.

2. Keyless start allows up to 10 operator-specific security codes. At startup, the machine preferences associated with an entered code are enabled. What's more, JDLink™ tracks hourly usage, fuel consumption, and more for each operator.

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

1

2

3

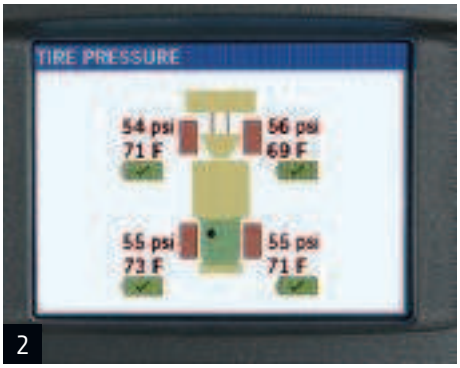
Courtesy of Machine.Market

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.

Courtesy of Machine.Market

1



2

3


4

5

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

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

2. Exclusive integrated tire monitoring reports pressures and temperatures on the monitor and remotely through JDLink.

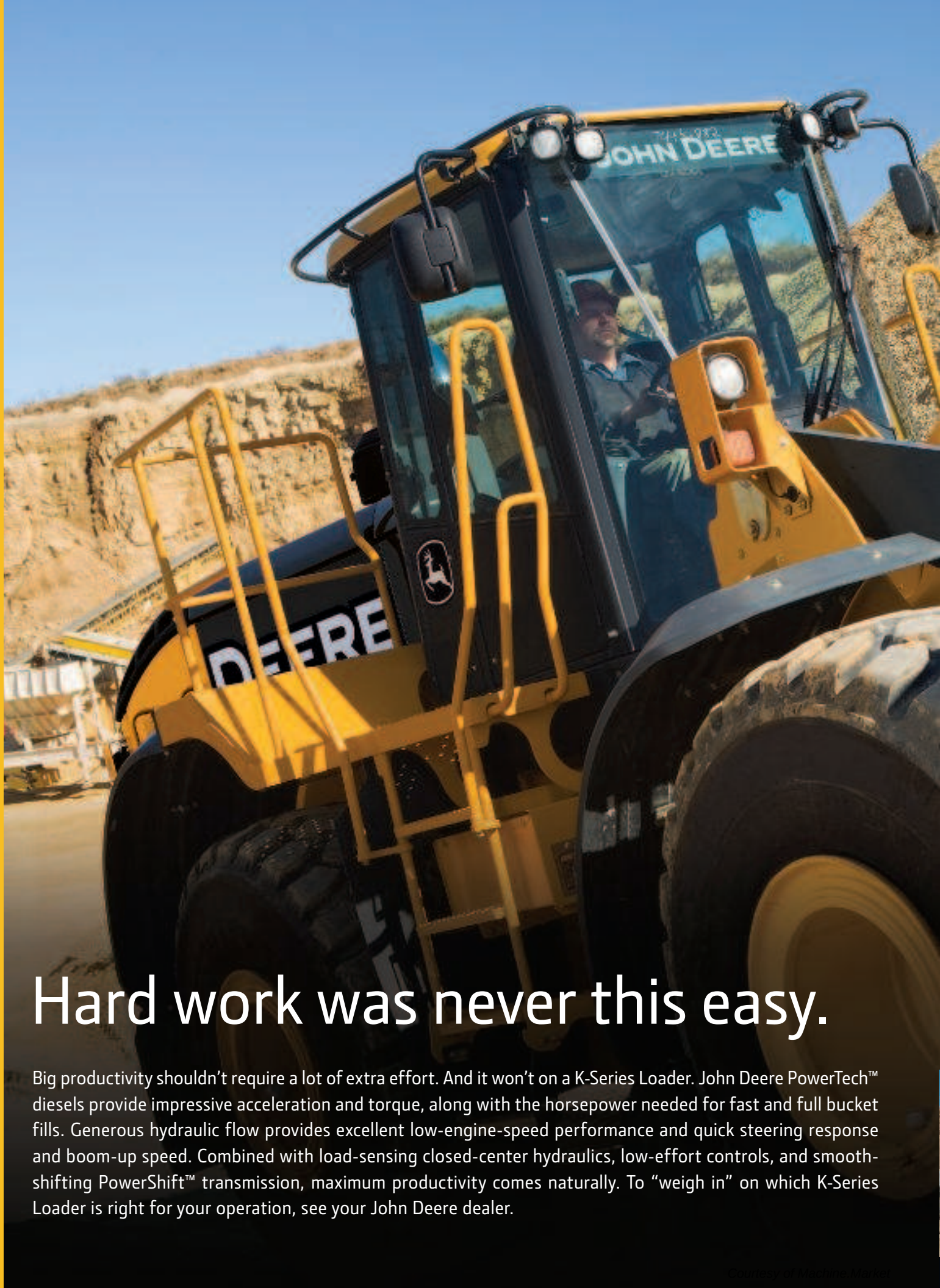
3. Customized machine settings such as Quick Shift, Auto-to-1st, and Ride Control. So you can match operating characteristics to specific jobs and conditions.

4. Optional rearview camera provides "eyes-in-the-back-of-the-head" visibility. And rear-object-detection radar gives an audible alert of approaching objects. It's a "must have" for high-traffic jobsites.

5. On IT4/Stage IIIB-equipped loaders, exhaust filter operation and maintenance status are indicated with warning lights and on-screen displays.

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.



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. Generous 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.

Courtesy of Machinio Market

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

Standard 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.

Available automatic differential lock engages as soon as a tire begins to slip. It's ideal for inexperienced operators or high-traction applications.

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 operator settable between 3.2 and 24.1 km/h (2 and 15 mph).

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

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


1


2


3

Courtesy of Machine.Market

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? Or emissions-sensitive nonattainment areas? 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.

High-Lift loaders feature an optional factory-installed boom that extends boom height so you can move materials and push productivity to even greater heights.

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

Powered cab pre-cleaner extends cab air-filter life when working in airborne debris.

Heated mirrors prevent fog and ice from obstructing the view and affecting productivity.

Want to increase the traction, flotation, and stability of your 844K-II? Spec the low-profile tire option.

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

With greater visibility to the work tool and an improved load path, the Hi-Vis coupler and forks (available on the 724K) help both loader and operator be more productive.

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

Courtesy of Machinio Market

1. Axle choices include manually actuated front differential lock with conventional rear axle, front and rear differential locks, or automatic front and rear differential locks. Open differentials are available on the 844K-II only for applications not requiring increased traction.

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

3. 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.

1

2

3

Courtesy of Machine.Market

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.

Courtesy of Machine.Market

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, connectors, and wiring harnesses. Instead, highly reliable circuit-board technology and sealed solid-state switches ensure the electrical integrity you need.

Heavy-duty axles with self-adjusting wet-disc brakes provide long life and sure stops. 744K, 824K, and 844K-II axles also employ cooling, filtration, and temperature monitoring to help increase durability.

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. Our IT4/Stage IIIB technology is simple, fuel efficient, fully integrated, and fully supported. It employs field-proven cooled exhaust gas recirculation (EGR) for reducing NO_X, and a diesel particulate filter (DPF) and diesel oxidation catalyst (DOC) to reduce particulate matter. Periodic active and passive regeneration automatically cleans the filter without impacting machine productivity.

1


2


3

Courtesy of Machine Market

JDLink enables your dealer to utilize Service ADVISOR Remote to read diagnostic trouble codes, record machine performance data, and even update software without making a trip to the jobsite — a real time- and money-saver.

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.

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.

IT4/Stage IIIB diesel particulate filter (DPF) is easily removed and can be serviced by your John Deere dealer.

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.

Courtesy of Machine.Market

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.

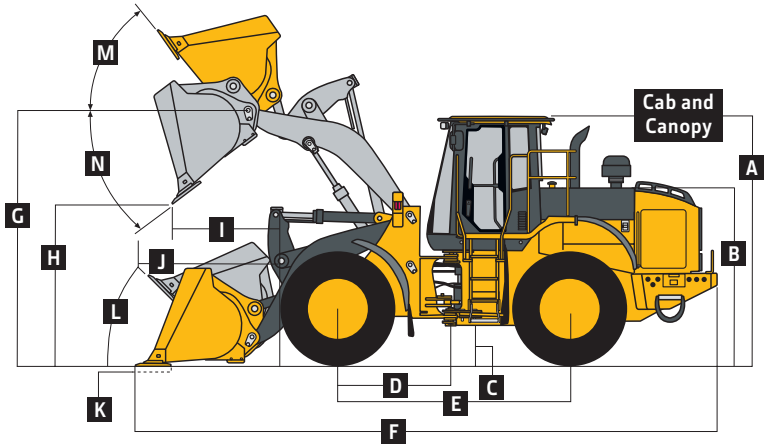
6. Under-hood light and sight gauges simplify coolant, hydraulic, and transmission fluid-level checks.

724K

Engine	724K Z-BAR / HIGH-LIFT		
Manufacturer and Model	John Deere PowerTech™ PVX 6090	John Deere PowerTech™ Plus 6090H	John Deere PowerTech™ 6090H
Non-Road Emission Standard	EPA Interim Tier 4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Cylinders	6	6	6
Valves Per Cylinder	4	4	4
Displacement	9.0 L (548 cu. in.)	9.0 L (548 cu. in.)	9.0 L (548 cu. in.)
Net Peak Power (ISO 9249)	197 kW (264 hp) at 1,800 rpm	197 kW (264 hp) at 1,800 rpm	197 kW (264 hp) at 1,800 rpm
Net Peak Torque (ISO 9249)	1161 Nm (856 lb.-ft.) at 1,300 rpm	1159 Nm (852 lb.-ft.) at 1,300 rpm	1159 Nm (852 lb.-ft.) at 1,300 rpm
Net Torque Rise	61%	60%	60%
Fuel System (electronically controlled)	High-pressure common rail	High-pressure common rail	High-pressure common rail
Lubrication	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler
Aspiration	Turbocharged, charge air cooled	Turbocharged, charge air cooled	Turbocharged, charge air cooled
Air Cleaner	Under-hood, dual-element dry type, restriction indicator in cab monitor for service	Under-hood, dual-element dry type, restriction indicator in cab monitor for service	Under-hood, dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 100-amp (130-amp optional) alternator	24 volt with 100-amp alternator	24 volt with 100-amp alternator
Batteries (2 – 12 volt)	1,400 CCA (each)	1,400 CCA (each)	1,400 CCA (each)
Transmission System			
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 2 selectable modes: kick-down or kick-up/down; and 3 adjustable clutch-cutoff settings		
	Standard 5-Speed with Lockup Torque Converter		*Optional 4-Speed*	
Maximum Travel Speeds (with 23.5 R 25, 1 Star L3 tires)	*Forward*	*Reverse*	*Forward*	*Reverse*
Range 1	7.5 km/h (4.7 mph)	7.9 km/h (4.9 mph)	7.2 km/h (4.5 mph)	7.6 km/h (4.7 mph)
Range 2	13.4 km/h (8.3 mph)	13.0 km/h (8.1 mph)	11.9 km/h (7.4 mph)	12.5 km/h (7.8 mph)
Range 3	22.6 km/h (14.0 mph)	28.8 km/h (17.9 mph)	23.1 km/h (14.4 mph)	24.2 km/h (15.1 mph)
Range 4	27.4 km/h (17.0 mph)	N/A	35.6 km/h (22.1 mph)	N/A
Range 5	40.0 km/h (24.9 mph)	N/A	N/A	N/A
Axles/Brakes			
Final Drives	Heavy-duty inboard-mounted planetary		
Differentials	Hydraulic locking front with conventional rear – standard; dual locking front and rear – optional		
Rear Axle Oscillation, Stop to Stop (with 23.5 R 25, 1 Star L3 tires)	26 deg. (13 deg. each direction)		
Service Brakes (conform to ISO 3450)	Hydraulically actuated, inboard carrier mounted, pressure oil cooled, self-adjusting, multi disc		
Parking Brakes (conform to ISO 3450)	Automatic spring applied, hydraulically released, oil cooled, multi disc		
Tires/Wheels *(see page 20 for complete tire adjustments)*			
	Tread Width	*Width Over Tires*	
Michelin 23.5 R 25, 1 Star L-3	2170 mm (85.4 in.)	2880 mm (113.4 in.)	
Serviceability			
Refill Capacities	EPA IT4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Fuel Tank (with ground-level fueling)	397 L (105 gal.)	352 L (93 gal.)	352 L (93 gal.)
Cooling System	45.4 L (48.1 qt.)	33.8 L (35.7 qt.)	33.8 L (35.7 qt.)
Engine Oil with Vertical Spin-On Filter	28 L (29.6 qt.)	29.6 L (28 qt.)	29.6 L (28 qt.)
Transmission Fluid with Vertical Filter	27 L (28.5 qt.)	27 L (28.5 qt.)	27 L (28.5 qt.)
Axle Oil (front and rear, each)	22 L (23 qt.)	22 L (23 qt.)	22 L (23 qt.)
Hydraulic Reservoir and Filter	110 L (29 gal.)	110 L (29 gal.)	110 L (29 gal.)
Park Brake Oil (wet disc)	0.6 L (20 oz.)	0.6 L (20 oz.)	0.6 L (20 oz.)
Hydraulic System/Steering			
Pump (loader and steering)	Variable-displacement, axial-piston pump; closed-center, pressure-compensating system		
Maximum Rated Flow at 6895 kPa (1,000 psi) and 2,350 rpm	310 L/m (82 gpm)		
System Relief Pressure (loader and steering)	25 166 kPa (3,650 psi)		
Loader Controls	2-function valve; joystick control or fingertip controls; hydraulic-function enable/disable; optional 3rd- and 4th-function valve with auxiliary lever		

Hydraulic System/Steering *(continued)*	724K Z-BAR / HIGH-LIFT	
Steering (conforms to ISO 5010)		
Type	Power, fully hydraulic	
Articulation Angle	80-deg. arc (40 deg. each direction)	
Turning Radius (measured to centerline of outside tire)	5.64 m (18 ft. 6 in.)	
Hydraulic Cycle Times	*Z-Bar*	*High-Lift*
Raise	6.4 sec.	6.4 sec.
Dump	1.4 sec.	1.6 sec.
Lower (float down)	3.0 sec.	3.0 sec.
Total	10.8 sec.	11.0 sec.

Dimensions and Specifications with Pin-On Bucket



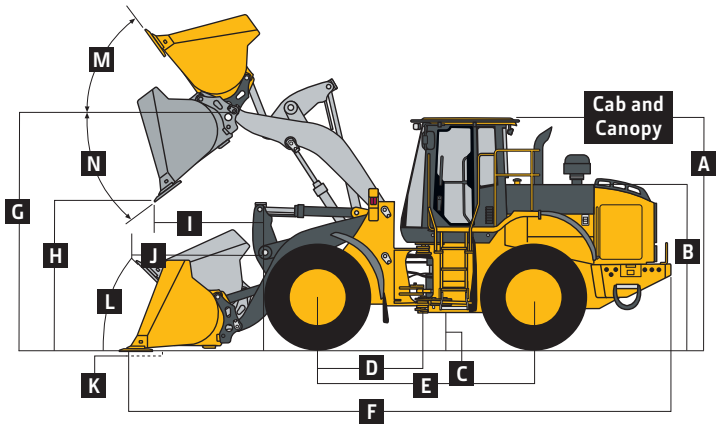
724K Z-BAR AND HIGH-LIFT LOADERS WITH PIN-ON BUCKET

	Z-Bar	*Z-Bar*	*High-Lift*	*High-Lift*
Dimensions with Bucket	*3.2-m³ (4.25 cu. yd.) general-purpose with bolt-on edge*	*3.6-m³ (4.75 cu. yd.) general-purpose with bolt-on edge*	*3.2-m³ (4.25 cu. yd.) general-purpose with bolt-on edge*	*3.6-m³ (4.75 cu. yd.) general-purpose with bolt-on edge*
A Height to Top of Cab and Canopy	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)
B Hood Height	2.53 m (8 ft. 4 in.)	2.53 m (8 ft. 4 in.)	2.53 m (8 ft. 4 in.)	2.53 m (8 ft. 4 in.)
C Ground Clearance	461 mm (18.1 in.)	461 mm (18.1 in.)	461 mm (18.1 in.)	461 mm (18.1 in.)
D Length from Centerline to Front Axle	1.60 m (5 ft. 3 in.)	1.60 m (5 ft. 3 in.)	1.60 m (5 ft. 3 in.)	1.60 m (5 ft. 3 in.)
E Wheelbase	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)
F Overall Length, Bucket on Ground	8.20 m (26 ft. 11 in.)	8.31 m (27 ft. 3 in.)	8.67 m (28 ft. 5 in.)	8.78 m (28 ft. 10 in.)
G Height to Hinge Pin, Fully Raised	4.12 m (13 ft. 6 in.)	4.12 m (13 ft. 6 in.)	4.54 m (14 ft. 11 in.)	4.54 m (14 ft. 11 in.)
H Dump Clearance, 45 deg., Full Height	2.91 m (9 ft. 7 in.)	2.84 m (9 ft. 4 in.)	3.33 m (10 ft. 11 in.)	3.26 m (10 ft. 8 in.)
I Reach, 45-deg. Dump, Full Height	1.06 m (3 ft. 6 in.)	1.13 m (3 ft. 9 in.)	1.19 m (3 ft. 11 in.)	1.25 m (4 ft. 1 in.)
J Reach, 45-deg. Dump, 2.13-m (7 ft. 0 in.) Clearance	1.61 m (5 ft. 3 in.)	1.67 m (5 ft. 6 in.)	2.06 m (6 ft. 9 in.)	2.12 m (6 ft. 11 in.)
K Maximum Digging Depth	123 mm (5.0 in.)	123 mm (5.0 in.)	216 mm (8.5 in.)	216 mm (8.5 in.)
L Maximum Rollback at Ground Level	41 deg.	41 deg.	42 deg.	42 deg.
M Maximum Rollback, Boom Fully Raised	55 deg.	55 deg.	47 deg.	47 deg.
N Maximum Bucket Dump Angle, Fully Raised	50 deg.	50 deg.	45 deg.	45 deg.
Loader Clearance Circle, Bucket Carry Position	13.19 m (43 ft. 3 in.)	13.25 m (43 ft. 6 in.)	13.62 m (44 ft. 8 in.)	13.68 m (44 ft. 11 in.)
Specifications with Bucket				
Capacity, Heaped	3.2 m³ (4.25 cu. yd.)	3.6 m³ (4.75 cu. yd.)	3.2 m³ (4.25 cu. yd.)	3.6 m³ (4.75 cu. yd.)
Capacity, Struck	3.0 m³ (3.5 cu. yd.)	3.2 m³ (4.2 cu. yd.)	2.8 m³ (3.7 cu. yd.)	3.2 m³ (4.2 cu. yd.)
Bucket Weight with Bolt-On Cutting Edge	1736 kg (3,827 lb.)	1822 kg (4,017 lb.)	1736 kg (3,827 lb.)	1822 kg (4,017 lb.)
Bucket Width	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)	3.04 m (10 ft. 0 in.)
Breakout Force	15 607 kg (34,408 lb.)	14 398 kg (31,742 lb.)	13 884 kg (30,610 lb.)	12 968 kg (28,590 lb.)
Tipping Load, Straight	16 516 kg (36,412 lb.)	16 392 kg (36,138 lb.)	13 291 kg (29,303 lb.)	13 087 kg (28,851 lb.)
Tipping Load, 40-deg. Full Turn	14 253 kg (31,421 lb.)	14 132 kg (31,155 lb.)	11 412 kg (25,160 lb.)	11 222 kg (24,740 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load (conforms to ISO 14397-1)*	7126 kg (15,711 lb.)	7066 kg (15,578 lb.)	5706 kg (12,580 lb.)	5611 kg (12,370 lb.)
Operating Weight	19 171 kg (42,265 lb.)	19 264 kg (42,470 lb.)	19 397 kg (42,763 lb.)	19 486 kg (42,959 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PVX 6090 (EPA Interim Tier 4/EU Stage IIIB) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

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

Dimensions and Specifications with Hi-Vis Coupler and Hook-On Bucket — 724K Z-BAR / HIGH-LIFT



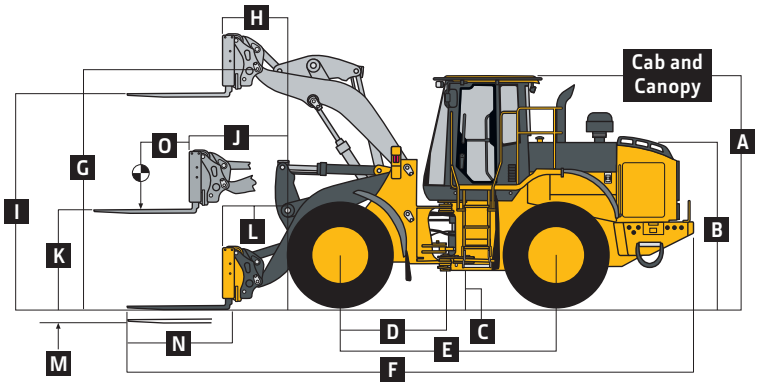
724K Z-BAR AND HIGH-LIFT LOADERS WITH QUICK-COUPLER AND HOOK-ON BUCKET

	Z-Bar	*High-Lift*
Dimensions with Bucket	*3.1-m³ (4.0 cu. yd.) general-purpose with bolt-on edge*	*3.1-m³ (4.0 cu. yd.) general-purpose with bolt-on edge*
A Height to Top of Cab and Canopy	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)
B Hood Height	2.53 m (8 ft. 4 in.)	2.53 m (8 ft. 4 in.)
C Ground Clearance	461 mm (18.1 in.)	461 mm (18.1 in.)
D Length from Centerline to Front Axle	1.60 m (5 ft. 3 in.)	1.60 m (5 ft. 3 in.)
E Wheelbase	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)
F Overall Length, Bucket on Ground	8.20 m (26 ft. 11 in.)	8.74 m (28 ft. 8 in.)
G Height to Hinge Pin, Fully Raised	4.12 m (13 ft. 6 in.)	4.54 m (14 ft. 11 in.)
H Dump Clearance, 45 deg., Full Height	2.88 m (9 ft. 6 in.)	3.11 m (10 ft. 2 in.)
I Reach, 45-deg. Dump, Full Height	1.15 m (3 ft. 9 in.)	1.28 m (4 ft. 2 in.)
J Reach, 45-deg. Dump, 2.13-m (7 ft. 0 in.) Clearance	1.72 m (5 ft. 8 in.)	2.10 m (6 ft. 11 in.)
K Maximum Digging Depth	123 mm (5.0 in.)	216 mm (8.5 in.)
L Maximum Rollback at Ground Level	41 deg.	42 deg.
M Maximum Rollback, Boom Fully Raised	55 deg.	47 deg.
N Maximum Bucket Dump Angle, Fully Raised	50 deg.	45 deg.
Loader Clearance Circle, Bucket Carry Position	12.93 m (42 ft. 5 in.)	13.72 m (45 ft. 0 in.)
Specifications with Bucket		
Capacity, Heaped	3.1 m³ (4.0 cu. yd.)	3.1 m³ (4.0 cu. yd.)
Capacity, Struck	2.4 m³ (3.2 cu. yd.)	2.4 m³ (3.2 cu. yd.)
Bucket Weight with Bolt-On Cutting Edge	1764 kg (3,890 lb.)	1764 kg (3,890 lb.)
Bucket Width	2.90 m (9 ft. 6 in.)	2.90 m (9 ft. 6 in.)
Breakout Force	14 524 kg (32,019 lb.)	12 404 kg (27,346 lb.)
Tipping Load, Straight	15 110 kg (33,312 lb.)	12 122 kg (26,724 lb.)
Tipping Load, 40-deg. Full Turn	12 982 kg (28,620 lb.)	10 351 kg (22,819 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load (conforms to ISO 14397-1)*	6491 kg (14,310 lb.)	5176 kg (11,410 lb.)
Operating Weight	19 562 kg (43,127 lb.)	19 788 kg (43,625 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PVX 6090 (EPA Interim Tier 4/EU Stage IIIB) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

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

Dimensions and Specifications with Hi-Vis Coupler and Construction Forks **724K Z-BAR / HIGH-LIFT**



724K Z-BAR AND HIGH-LIFT LOADERS WITH QUICK-COUPLER AND HOOK-ON CONSTRUCTION FORKS

	Z-Bar	*Z-Bar*	*High-Lift*	*High-Lift*
Dimensions with Forks	*1.52-m (60 in.) tine length*	*1.83-m (72 in.) tine length*	*1.52-m (60 in.) tine length*	*1.83-m (72 in.) tine length*
A Height to Top of Cab and Canopy	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)
B Hood Height	2.53 m (8 ft. 4 in.)	2.53 m (8 ft. 4 in.)	2.53 m (8 ft. 4 in.)	2.53 m (8 ft. 4 in.)
C Ground Clearance	461 mm (18.1 in.)	461 mm (18.1 in.)	461 mm (18.1 in.)	461 mm (18.1 in.)
D Length from Centerline to Front Axle	1.60 m (5 ft. 3 in.)	1.60 m (5 ft. 3 in.)	1.60 m (5 ft. 3 in.)	1.60 m (5 ft. 3 in.)
E Wheelbase	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)	3.26 m (10 ft. 8 in.)
F Overall Length, Forks on Ground	8.89 m (29 ft. 2 in.)	9.19 m (30 ft. 2 in.)	9.35 m (30 ft. 8 in.)	9.65 m (31 ft. 8 in.)
G Height to Hinge Pin, Fully Raised	4.12 m (13 ft. 6 in.)	4.12 m (13 ft. 6 in.)	4.54 m (14 ft. 11 in.)	4.54 m (14 ft. 11 in.)
H Reach, Fully Raised	788 mm (31.0 in.)	788 mm (31.0 in.)	905 mm (35.6 in.)	905 mm (35.6 in.)
I Fork Height, Fully Raised	3.89 m (12 ft. 9.0 in.)	3.89 m (12 ft. 9.0 in.)	4.22 m (13 ft. 10.1 in.)	4.22 m (13 ft. 10.1 in.)
J Maximum Reach, Fork Level	1.68 m (5 ft. 6.0 in.)	1.68 m (5 ft. 6.0 in.)	2.07 m (6 ft. 9.5 in.)	2.07 m (6 ft. 9.5 in.)
K Fork Height, Maximum Reach	1.71 m (5 ft. 7.0 in.)	1.71 m (5 ft. 7.0 in.)	1.86 m (6 ft. 1.2 in.)	1.86 m (6 ft. 1.2 in.)
L Reach, Ground Level	1.17 m (3 ft. 10.0 in.)	1.17 m (3 ft. 10.0 in.)	1.64 m (5 ft. 4.6 in.)	1.64 m (5 ft. 4.6 in.)
M Depth Below Ground	89 mm (4.0 in.)	89 mm (4.0 in.)	181 mm (7.1 in.)	181 mm (7.1 in.)
N Tine Length	1.52 m (60 in.)	1.83 m (72 in.)	1.52 m (60 in.)	1.83 m (72 in.)
O Load Position, 50% Tine Length	0.76 m (30 in.)	0.92 m (36 in.)	0.76 m (30 in.)	0.92 m (36 in.)
Specifications with Forks				
Tipping Load, Straight	10 995 kg (24,239 lb.)	10 434 kg (23,004 lb.)	9521 kg (20,991 lb.)	9069 kg (19,994 lb.)
Tipping Load, 40-deg. Turn	9485 kg (20,910 lb.)	8992 kg (19,824 lb.)	8176 kg (18,025 lb.)	7778 kg (17,148 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load (conforms to ISO 14397-1 and SAE J1197)*	4742 kg (10,455 lb.)	4496 kg (9,912 lb.)	4088 kg (9,012 lb.)	3889 kg (8,574 lb.)
Rated Operating Load, Rough Terrain, 60% Full-Turn Tipping Load (conforms to EN474-3)*	5691 kg (12,547 lb.)	5395 kg (11,894 lb.)	4906 kg (10,815 lb.)	4667 kg (10,289 lb.)
Rated Operating Load, Firm and Level Ground, 80% Full-Turn Tipping Load (conforms to EN474-3)*	7588 kg (16,729 lb.)	7194 kg (15,859 lb.)	6541 kg (14,420 lb.)	6222 kg (13,718 lb.)
Operating Weight	19 091 kg (42,088 lb.)	19 151 kg (42,220 lb.)	19 317 kg (42,587 lb.)	19 377 kg (42,719 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PVX 6090 (EPA Interim Tier 4/EU Stage IIIB) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

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

Adjustments to Operating Weights and Tipping Loads with Buckets — 724K Z-BAR / HIGH-LIFT

Adjustments to operating weights, tipping loads, and tires are based on Z-bar machine with pin-on 3.6-m³ (4.75 cu. yd.) 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 79-kg (175 lb.) operator*

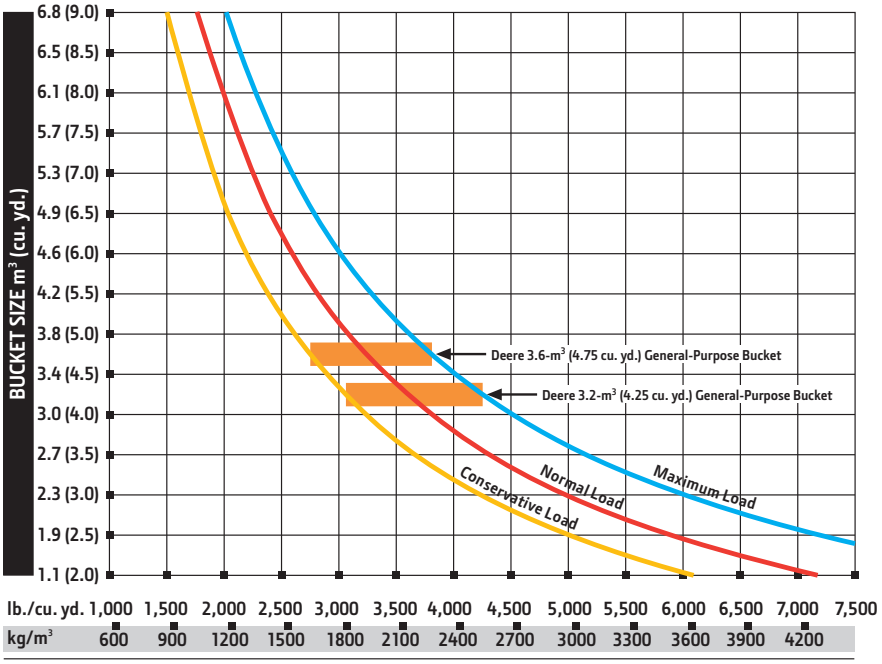
Add (+) or deduct (–) kg (lb.) as indicated for loaders with 3-piece rims	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 40-deg. Full Turn SAE*	*Tread Width*	*Width Over Tires*	*Vertical Height*
John Deere PowerTech PVX 6090	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	N/A	N/A	N/A
John Deere PowerTech Plus 6090H	–111 kg (–245 lb.)	–84 kg (–185 lb.)	–83 kg (–183 lb.)	N/A	N/A	N/A
John Deere PowerTech 6090H	–105 kg (–232 lb.)	–74 kg (–163 lb.)	–74 kg (–163 lb.)	N/A	N/A	N/A
Michelin 23.5 R 25, 1 Star L-3	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Goodyear 23.5 R 25, 1 Star L-3	+12 kg (+26 lb.)	+9 kg (+20 lb.)	+8 kg (+17 lb.)	0 mm (0 in.)	–5 mm (–0.2 in.)	+12 mm (+0.5 in.)
Titan 23.5 R 25, 1 Star L-3	+12 kg (+26 lb.)	+9 kg (+20 lb.)	+8 kg (+17 lb.)	0 mm (0 in.)	–48 mm (–1.9 in.)	+10 mm (+0.4 in.)
Bridgestone 23.5 R 25, 1 Star L-3	+116 kg (+256 lb.)	+86 kg (+190 lb.)	+76 kg (+167 lb.)	0 mm (0 in.)	–28 mm (–1.1 in.)	+17 mm (+0.7 in.)
Titan 23.5-25, 20 PR L-3	–156 kg (–343 lb.)	–115 kg (–255 lb.)	–102 kg (–224 lb.)	0 mm (0 in.)	+27 mm (+1.1 in.)	0 mm (0 in.)
Titan 725/70-25, 16-Ply L-4T (Logger Style)†ß	+266 kg (+587 lb.)	+208 kg (+459 lb.)	+183 kg (+404 lb.)	+37 mm (+1.5 in.)	+95 mm (+3.7 in.)	+49 mm (+1.9 in.)
Michelin 750/65 R 25, 1 Star L-3T†ß	+622 kg (+1,371 lb.)	+472 kg (+1,041 lb.)	+416 kg (+917 lb.)	+37 mm (+1.5 in.)	+158 mm (+6.2 in.)	+12 mm (+0.5 in.)

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

†*Equipped with 5-piece heavy-duty rims.*

ß*Requires 9-deg. rear axle stops.*

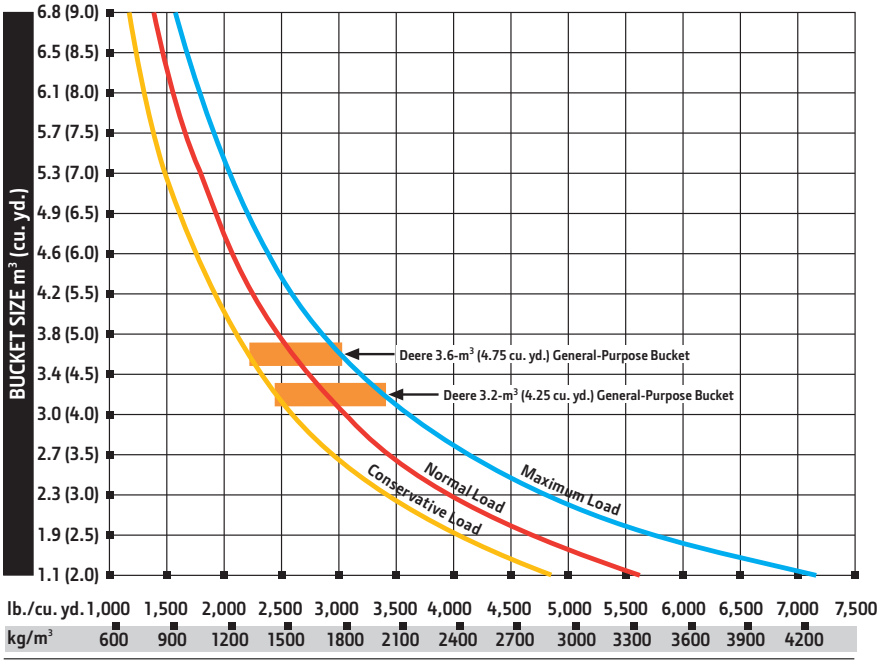
Bucket Selection Guides* — 724K Z-BAR



724K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486
Cinders (coal, ashes, clinkers)	673	1,134
Clay and gravel, dry	1602	2,700
Clay, compact, solid	1746	2,943
Clay, dry in lump loose	1009	1,701
Clay, excavated in water	1282	2,160
Coal, anthracite, broken, loose	865	1,458
Coal, bituminous, moderately wet	801	1,350
Earth, common loam, dry	1218	2,052
Earth, mud, packed	1843	3,105
Granite, broken	1538	2,592
Gypsum	2275	3,834
Limestone, coarse, sized	1570	2,646
Limestone, mixed sizes	1682	2,835
Limestone, pulverized or crushed	1362	2,295
Sand, damp	2083	3,510
Sand, dry	1762	2,970
Sand, voids, full of water	2083	3,510
Sandstone, quarried	1314	2,214
Shale, broken crushed	1362	2,295
Slag, furnace granulated	1955	3,294
Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Stone or gravel, 18.75-mm (3/4") size	1602	2,700

* 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	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486
Cinders (coal, ashes, clinkers)	673	1,134
Clay and gravel, dry	1602	2,700
Clay, compact, solid	1746	2,943
Clay, dry in lump loose	1009	1,701
Clay, excavated in water	1282	2,160
Coal, anthracite, broken, loose	865	1,458
Coal, bituminous, moderately wet	801	1,350
Earth, common loam, dry	1218	2,052
Earth, mud, packed	1843	3,105
Granite, broken	1538	2,592
Gypsum	2275	3,834
Limestone, coarse, sized	1570	2,646
Limestone, mixed sizes	1682	2,835
Limestone, pulverized or crushed	1362	2,295
Sand, damp	2083	3,510
Sand, dry	1762	2,970
Sand, voids, full of water	2083	3,510
Sandstone, quarried	1314	2,214
Shale, broken crushed	1362	2,295
Slag, furnace granulated	1955	3,294
Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Stone or gravel, 18.75-mm (3/4") size	1602	2,700

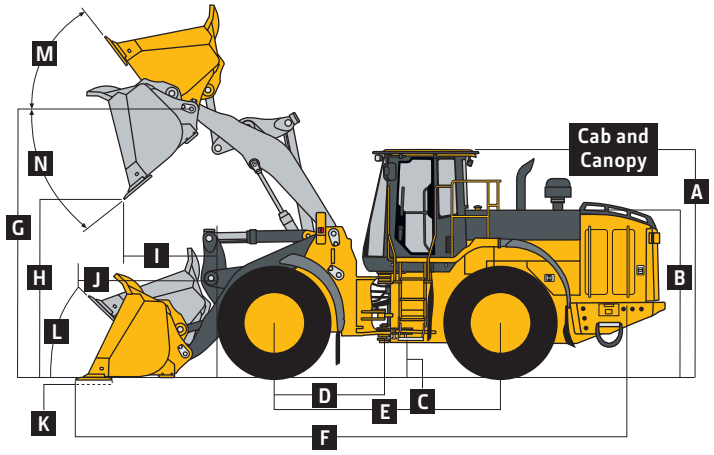
* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. 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

Engine	744K Z-BAR / HIGH-LIFT		
Manufacturer and Model	John Deere PowerTech™ PSX 6090	John Deere PowerTech™ Plus 6090H	John Deere PowerTech™ 6090H
Non-Road Emission Standard	EPA Interim Tier 4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Cylinders	6	6	6
Valves Per Cylinder	4	4	4
Displacement	9.0 L (548 cu. in.)	9.0 L (548 cu. in.)	9.0 L (548 cu. in.)
Net Peak Power (ISO 9249)	227 kW (304 hp) at 1,500 rpm	227 kW (304 hp) at 1,500 rpm	227 kW (304 hp) at 1,500 rpm
Net Peak Torque (ISO 9249)	1456 Nm (1,074 lb.-ft.) at 1,400 rpm	1456 Nm (1,074 lb.-ft.) at 1,400 rpm	1456 Nm (1,074 lb.-ft.) at 1,400 rpm
Net Torque Rise	47%	47%	47%
Fuel System (electronically controlled)	High-pressure common rail	High-pressure common rail	High-pressure common rail
Lubrication	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler
Aspiration	Series turbocharged, charge air cooled	Turbocharged, charge air cooled	Turbocharged, charge air cooled
Air Cleaner	Under-hood, dual-element dry type, restriction indicator in cab monitor for service	Under-hood, dual-element dry type, restriction indicator in cab monitor for service	Under-hood, dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 100-amp (130-amp optional) alternator	24 volt with 100-amp alternator	24 volt with 100-amp alternator
Batteries (2 – 12 volt)	1,400 CCA (each)	1,400 CCA (each)	1,400 CCA (each)
Transmission System			
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 2 selectable modes: kick-down or kick-up/down; and 3 adjustable clutch-cutoff settings		
	Standard 5-Speed with Lockup Torque Converter		*Optional 4-Speed*
Maximum Travel Speeds (with 26.5 R 25, 1 Star L3 tires)	*Forward*	*Reverse*	*Forward* / *Reverse*
Range 1	7.4 km/h (4.6 mph)	7.4 km/h (4.6 mph)	6.6 km/h (4.1 mph) / 6.6 km/h (4.1 mph)
Range 2	14.3 km/h (8.9 mph)	14.3 km/h (8.9 mph)	13.8 km/h (8.6 mph) / 13.8 km/h (8.6 mph)
Range 3	22.2 km/h (13.8 mph)	32.3 km/h (20.1 mph)	20.8 km/h (12.9 mph) / 29.9 km/h (18.6 mph)
Range 4	32.2 km/h (20.0 mph)	N/A	40.0 km/h (24.9 mph) / N/A
Range 5	40.0 km/h (24.9 mph)	N/A	N/A / N/A
Axles/Brakes			
Final Drives	Heavy-duty inboard-mounted planetary		
Differentials	Hydraulic locking front with conventional rear – standard; dual locking front and rear – optional		
Rear Axle Oscillation, Stop to Stop (with 23.5 R 25, 1 Star L3 tires)	26 deg. (13 deg. each direction)		
Service Brakes (conform to ISO 3450)	Hydraulically actuated, inboard sun-gear mounted, oil cooled, self-adjusting, single disc		
Parking Brakes (conform to ISO 3450)	Automatic spring applied, hydraulically released, oil cooled, multi disc		
Tires/Wheels *(see page 24 for complete tire adjustments)*			
	Tread Width	*Width Over Tires*	
Michelin 26.5 R 25, 1 Star L-3	2298 mm (90.5 in.)	3065 mm (120.7 in.)	
Serviceability			
Refill Capacities	EPA IT4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Fuel Tank (with ground-level fueling)	492 L (130 gal.)	469 L (124 gal.)	469 L (124 gal.)
Cooling System	50.3 L (53.2 qt.)	44.8 L (47.3 qt.)	44.8 L (47.3 qt.)
Engine Oil with Vertical Spin-On Filter	34 L (36 qt.)	34 L (36 qt.)	34 L (36 qt.)
Transmission Fluid with Vertical Filter	27.9 L (29.5 qt.)	27.9 L (29.5 qt.)	27.9 L (29.5 qt.)
Axle Oil (front and rear, each)	46 L (49 qt.)	46 L (49 qt.)	46 L (49 qt.)
Hydraulic Reservoir and Filter	159 L (42 gal.)	159 L (42 gal.)	159 L (42 gal.)
Park Brake Oil (wet disc)	0.7 L (24 oz.)	0.7 L (24 oz.)	0.7 L (24 oz.)
Hydraulic System/Steering			
Pump (loader and steering)	2 variable-displacement, load-sensing axial-piston pumps; closed-center system		
Maximum Rated Flow at 6895 kPa (1,000 psi) and 2,350 rpm	515 L/m (136 gpm)		
System Relief Pressure (loader and steering)	22 670 kPa (3,288 psi)		
Loader Controls	2-function valve; single- or dual-lever controls; control lever lockout feature; optional 3rd- and 4th-function valve with auxiliary levers		
Steering (conforms to ISO 5010)			
Type	Power, fully hydraulic		
Articulation Angle	80-deg. arc (40 deg. each direction)		
Turning Radius (measured to centerline of outside tire)	6.28 m (20 ft. 7 in.)		

Hydraulic System/Steering *(continued)*	**744K Z-BAR / HIGH-LIFT**	
Hydraulic Cycle Times	*Z-Bar*	*High-Lift*
Raise	≤6.8 sec.	≤6.8 sec.
Dump	1.6 sec.	1.6 sec.
Lower (float down)	2.8 sec.	2.8 sec.
Total	11.2 sec.	11.2 sec.

Dimensions and Specifications with Pin-On Bucket



744K Z-BAR AND HIGH-LIFT LOADERS WITH PIN-ON BUCKET

	Z-Bar	*Z-Bar*	*Z-Bar*	*Z-Bar*	*Z-Bar*	*High-Lift*
Dimensions with Bucket	*4.0-m³ (5.25 cu. yd.) general-purpose with bolt-on edge*	*4.4-m³ (5.75 cu. yd.) light-material with bolt-on edge*	*4.0-m³ (5.25 cu. yd.) general-purpose with teeth and segments*	*4.4-m³ (5.75 cu. yd.) light-material with teeth and segments*	*4.4-m³ (5.75 cu. yd.) light-material with JAGZ™*	*4.0-m³ (5.25 cu. yd.) general-purpose with bolt-on edge*
A Height to Top of Cab and Canopy	3.50 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)
B Hood Height	2.65 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)
C Ground Clearance	462 mm (18.2 in.)	462 mm (18.2 in.)	462 mm (18.2 in.)	462 mm (18.2 in.)	462 mm (18.2 in.)	462 mm (18.2 in.)
D Length from Centerline to Front Axle	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)
E Wheelbase	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. 4 in.)	3.46 m (11 ft. 4 in.)	3.46 m (11 ft. 4 in.)
F Overall Length, Bucket on Ground	9.01 m (29 ft. 7 in.)	9.09 m (29 ft. 10 in.)	9.11 m (29 ft. 11 in.)	9.27 m (30 ft. 5 in.)	9.00 m (29 ft. 6 in.)	9.64 m (31 ft. 8 in.)
G Height to Hinge Pin, Fully Raised	4.28 m (14 ft. 1 in.)	4.28 m (14 ft. 1 in.)	4.28 m (14 ft. 1 in.)	4.28 m (14 ft. 1 in.)	4.28 m (14 ft. 1 in.)	4.85 m (15 ft. 11 in.)
H Dump Clearance, 45 deg., Full Height	3.04 m (10 ft. 0 in.)	2.98 m (9 ft. 9 in.)	2.97 m (9 ft. 9 in.)	2.86 m (9 ft. 5 in.)	3.04 m (10 ft. 0 in.)	3.61 m (11 ft. 10 in.)
I Reach, 45-deg. Dump, Full Height	1.23 m (4 ft. 0 in.)	1.29 m (4 ft. 3 in.)	1.30 m (4 ft. 3 in.)	1.42 m (4 ft. 8 in.)	1.23 m (4 ft. 0 in.)	1.38 m (4 ft. 6 in.)
J Reach, 45-deg. Dump, 2.13-m (7 ft. 0 in.) Clearance	1.85 m (6 ft. 1 in.)	1.88 m (6 ft. 2 in.)	1.88 m (6 ft. 2 in.)	1.95 m (6 ft. 5 in.)	1.85 m (6 ft. 1 in.)	2.41 m (7 ft. 11 in.)
K Maximum Digging Depth	80 mm (3.2 in.)	80 mm (3.2 in.)	80 mm (3.2 in.)	80 mm (3.2 in.)	80 mm (3.2 in.)	214 mm (8.4 in.)
L Maximum Rollback at Ground Level	39.5 deg.	39.5 deg.	39.5 deg.	39.5 deg.	39.5 deg.	40.6 deg.
M Maximum Rollback, Boom Fully Raised	54.9 deg.	54.9 deg.	54.9 deg.	54.9 deg.	54.9 deg.	53.1 deg.
N Maximum Bucket Dump Angle, Fully Raised	49.4 deg.	49.4 deg.	49.4 deg.	49.4 deg.	49.4 deg.	39.2 deg.
Loader Clearance Circle, Bucket Carry Position	14.01 m (46 ft. 0 in.)	14.07 m (46 ft. 2 in.)	14.12 m (46 ft. 4 in.)	14.18 m (46 ft. 6 in.)	14.01 m (46 ft. 0 in.)	14.59 m (47 ft. 10 in.)
Specifications with Bucket						
Capacity, Heaped	4.0 m³ (5.25 cu. yd.)	4.4 m³ (5.75 cu. yd.)	4.0 m³ (5.25 cu. yd.)	4.4 m³ (5.75 cu. yd.)	4.0 m³ (5.25 cu. yd.)	4.0 m³ (5.25 cu. yd.)
Capacity, Struck	3.4 m³ (4.5 cu. yd.)	3.8 m³ (5.0 cu. yd.)	3.4 m³ (4.5 cu. yd.)	3.8 m³ (5.0 cu. yd.)	3.4 m³ (4.5 cu. yd.)	3.4 m³ (4.5 cu. yd.)
Bucket Weight with Bolt-On Cutting Edge	2517 kg (5,549 lb.)	2595 kg (5,722 lb.)	2643 kg (5,827 lb.)	2721 kg (5,999 lb.)	2540 kg (5,599 lb.)	2517 kg (5,549 lb.)
Bucket Width	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)
Breakout Force	19 416 kg (42,805 lb.)	18 276 kg (40,292 lb.)	19 345 kg (42,648 lb.)	18 190 kg (40,102 lb.)	19 462 kg (42,906 lb.)	17 433 kg (38,433 lb.)
Tipping Load, Straight	19 678 kg (43,383 lb.)	19 482 kg (42,950 lb.)	19 511 kg (43,013 lb.)	19 312 kg (42,576 lb.)	19 650 kg (43,321 lb.)	15 559 kg (34,303 lb.)
Tipping Load, 37-deg. Partial Turn	17 327 kg (38,199 lb.)	17 143 kg (37,793 lb.)	17 159 kg (37,829 lb.)	16 973 kg (37,419 lb.)	17 299 kg (38,137 lb.)	13 614 kg (30,013 lb.)
Tipping Load, 40-deg. Full Turn	16 946 kg (37,360 lb.)	16 764 kg (36,958 lb.)	16 778 kg (36,990 lb.)	16 594 kg (36,584 lb.)	16 918 kg (37,298 lb.)	13 299 kg (29,319 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load (conforms to ISO 14397-1)*	8473 kg (18,680 lb.)	8382 kg (18,479 lb.)	8389 kg (18,495 lb.)	8297 kg (18,292 lb.)	8459 kg (18,649 lb.)	6650 kg (14,660 lb.)
Operating Weight	24 346 kg (53,674 lb.)	24 425 kg (53,847 lb.)	24 472 kg (53,952 lb.)	24 551 kg (54,125 lb.)	24 368 kg (53,722 lb.)	24 897 kg (54,889 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PSX 6090 (EPA Interim Tier 4/EU Stage IIIB) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

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

Adjustments to Operating Weights and Tipping Loads with Buckets — 744K Z-BAR / HIGH-LIFT

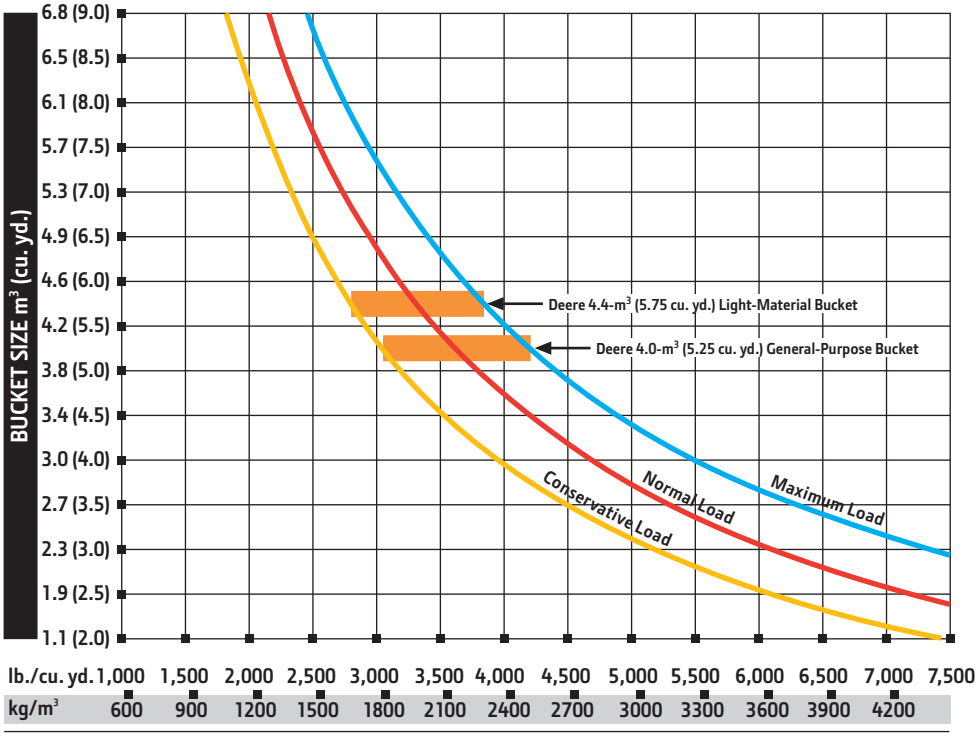
Adjustments to operating weights, tipping loads, and tires are based on Z-bar machine with pin-on 4.0-m³ (5.25 cu. yd.) general-purpose bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator*

Add (+) or deduct (–) kg (lb.) as indicated for loaders with 3-piece rims	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 37-deg. Partial Turn SAE*	*Tipping Load, 40-deg. Full Turn SAE*	*Tread Width*	*Width Over Tires*	*Vertical Height*
John Deere PowerTech PSX 6090	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	N/A	N/A	N/A
John Deere PowerTech Plus 6090H	+65 kg (+143 lb.)	+65 kg (+143 lb.)	+316 kg (+697 lb.)	+299 kg (+659 lb.)	N/A	N/A	N/A
John Deere PowerTech 6090H	+59 kg (+130 lb.)	+367 kg (+809 lb.)	+307 kg (+677 lb.)	+290 kg (+639 lb.)	N/A	N/A	N/A
Michelin 26.5 R 25, 2 Star L-3	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Titan 26.5 R 25, 1 Star L-3	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Goodyear 26.5 R 25, 1 Star L-3	–56 kg (–123 lb.)	–40 kg (–88 lb.)	–36 kg (–79 lb.)	–35 kg (–77 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Firestone 26.5-25, 20-Ply L-3	–360 kg (–794 lb.)	–256 kg (–565 lb.)	–230 kg (–507 lb.)	–226 kg (–498 lb.)	0 mm (0 in.)	–5 mm (–0.2 in.)	+36 mm (+1.4 in.)
Firestone 26.5-25, 20-Ply L-5[ß]	+312 kg (+688 lb.)	+222 kg (+490 lb.)	+199 kg (+440 lb.)	+196 kg (+432 lb.)	0 mm (0 in.)	–5 mm (–0.2 in.)	+60 mm (+2.4 in.)

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

[ß]*Requires 8-deg. rear axle stops.*

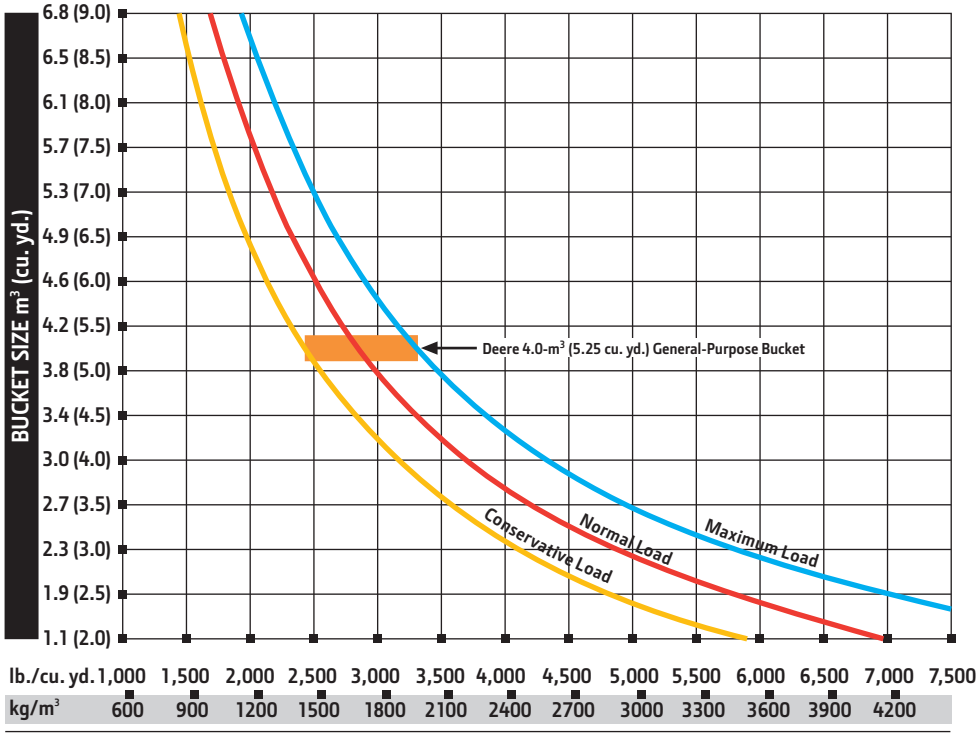
Bucket Selection Guides* — 744K Z-BAR



744K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486
Cinders (coal, ashes, clinkers)	673	1,134
Clay and gravel, dry	1602	2,700
Clay, compact, solid	1746	2,943
Clay, dry in lump loose	1009	1,701
Clay, excavated in water	1282	2,160
Coal, anthracite, broken, loose	865	1,458
Coal, bituminous, moderately wet	801	1,350
Earth, common loam, dry	1218	2,052
Earth, mud, packed	1843	3,105
Granite, broken	1538	2,592
Gypsum	2275	3,834
Limestone, coarse, sized	1570	2,646
Limestone, mixed sizes	1682	2,835
Limestone, pulverized or crushed	1362	2,295
Sand, damp	2083	3,510
Sand, dry	1762	2,970
Sand, voids, full of water	2083	3,510
Sandstone, quarried	1314	2,214
Shale, broken crushed	1362	2,295
Slag, furnace granulated	1955	3,294
Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Stone or gravel, 18.75-mm (3/4") size	1602	2,700

* 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	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486
Cinders (coal, ashes, clinkers)	673	1,134
Clay and gravel, dry	1602	2,700
Clay, compact, solid	1746	2,943
Clay, dry in lump loose	1009	1,701
Clay, excavated in water	1282	2,160
Coal, anthracite, broken, loose	865	1,458
Coal, bituminous, moderately wet	801	1,350
Earth, common loam, dry	1218	2,052
Earth, mud, packed	1843	3,105
Granite, broken	1538	2,592
Gypsum	2275	3,834
Limestone, coarse, sized	1570	2,646
Limestone, mixed sizes	1682	2,835
Limestone, pulverized or crushed	1362	2,295
Sand, damp	2083	3,510
Sand, dry	1762	2,970
Sand, voids, full of water	2083	3,510
Sandstone, quarried	1314	2,214
Shale, broken crushed	1362	2,295
Slag, furnace granulated	1955	3,294
Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Stone or gravel, 18.75-mm (3/4") size	1602	2,700

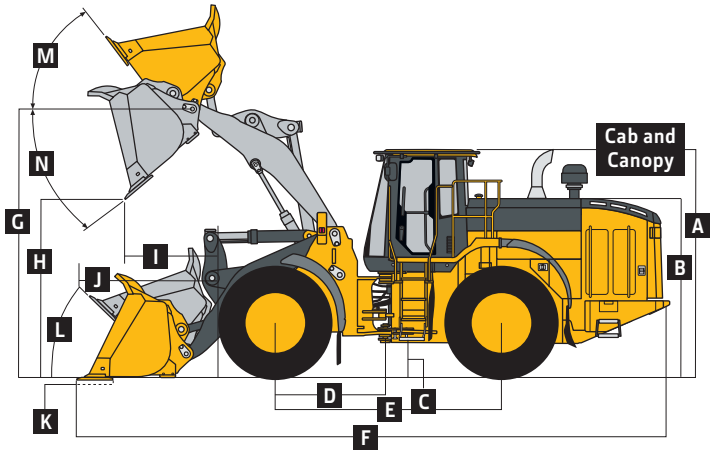
* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. 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

Engine	824K Z-BAR / HIGH-LIFT		
Manufacturer and Model	John Deere PowerTech™ PSX 6135	John Deere PowerTech™ Plus 6135H	John Deere PowerTech™ 6135H
Non-Road Emission Standard	EPA Interim Tier 4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Cylinders	6	6	6
Valves Per Cylinder	4	4	4
Displacement	13.5 L (824 cu. in.)	13.5 L (824 cu. in.)	13.5 L (824 cu. in.)
Net Peak Power (ISO 9249)	248 kW (333 hp) at 1,600 rpm	248 kW (333 hp) at 1,600 rpm	248 kW (333 hp) at 1,600 rpm
Net Peak Torque (ISO 9249)	1619 Nm (1,194 lb.-ft.) at 900 rpm	1619 Nm (1,194 lb.-ft.) at 900 rpm	1619 Nm (1,194 lb.-ft.) at 900 rpm
Net Torque Rise	55%	55%	55%
Fuel System	Mechanically actuated electronic unit injectors	Mechanically actuated electronic unit injectors	Mechanically actuated electronic unit injectors
Lubrication	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler
Aspiration	Series turbocharged, charge air cooled	Turbocharged, charge air cooled	Turbocharged, charge air cooled
Air Cleaner	Under-hood, dual-element dry type, restriction indicator in cab monitor for service	Under-hood, dual-element dry type, restriction indicator in cab monitor for service	Under-hood, dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 100-amp (130-amp optional) alternator	24 volt with 100-amp alternator	24 volt with 100-amp alternator
Batteries (2 – 12 volt)	1,400 CCA (each)	1,400 CCA (each)	1,400 CCA (each)
Transmission System			
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 2 selectable modes: kick-down or kick-up/down; and 3 adjustable clutch-cutoff settings		
	Standard 5-Speed with Lockup Torque Converter		*Optional 4-Speed*	
Maximum Travel Speeds (with 26.5 R 25, 1 Star L3 tires)	*Forward*	*Reverse*	*Forward*	*Reverse*
Range 1	8.3 km/h (5.2 mph)	8.3 km/h (5.2 mph)	7.4 km/h (4.6 mph)	7.4 km/h (4.6 mph)
Range 2	14.9 km/h (9.3 mph)	14.0 km/h (8.7 mph)	13.8 km/h (8.6 mph)	13.8 km/h (8.6 mph)
Range 3	23.1 km/h (14.4 mph)	33.9 km/h (21.1 mph)	21.0 km/h (13.1 mph)	30.1 km/h (18.7 mph)
Range 4	33.9 km/h (21.1 mph)	N/A	40.0 km/h (24.9 mph)	N/A
Range 5	40.0 km/h (24.9 mph)	N/A	N/A	N/A
Axles/Brakes			
Final Drives	Heavy-duty inboard-mounted planetary		
Differentials	Hydraulic locking front with conventional rear – standard; dual locking front and rear – optional		
Rear Axle Oscillation, Stop to Stop (with 26.5 R 25, 1 Star L3 tires)	26 deg. (13 deg. each direction)		
Service Brakes (conform to ISO 3450)	Hydraulically actuated, inboard sun-gear mounted, pressure oil cooled, self-adjusting, single disc		
Parking Brakes (conform to ISO 3450)	Automatic spring applied, hydraulically released, oil cooled, multi disc		
Tires/Wheels *(see page 28 for complete tire adjustments)*			
	Tread Width	*Width Over Tires*	
Michelin 26.5 R 25, 1 Star L-3	2298 mm (90.5 in.)	3065 mm (120.7 in.)	
Serviceability			
Refill Capacities	EPA IT4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Fuel Tank (with ground-level fueling)	469.4 L (124 gal.)	469.4 L (124 gal.)	469.4 L (124 gal.)
Cooling System	73.8 L (78 qt.)	47.4 L (50.1 qt.)	47.4 L (50.1 qt.)
Engine Oil with Vertical Spin-On Filter	40 L (40 qt.)	36 L (38 qt.)	36 L (38 qt.)
Transmission Fluid with Vertical Filter	27.9 L (29.5 qt.)	27.9 L (29.5 qt.)	27.9 L (29.5 qt.)
Axle Oil (front and rear, each)	27.9 L (29.5 qt.)	27.9 L (29.5 qt.)	27.9 L (29.5 qt.)
Hydraulic Reservoir and Filter	159 L (42 gal.)	159 L (42 gal.)	159 L (42 gal.)
Park Brake Oil (wet disc)	0.7 L (24 oz.)	0.7 L (24 oz.)	0.7 L (24 oz.)
Hydraulic System/Steering			
Pump (loader and steering)	2 variable-displacement, load-sensing axial-piston pumps; closed-center system		
Maximum Rated Flow at 6895 kPa (1,000 psi) and 2,350 rpm	513 L/m (136 gpm)		
System Relief Pressure (loader and steering)	25 166 kPa (3,650 psi)		
Loader Controls	2-function valve; single- or dual-lever controls; control lever lockout feature; optional 3rd- and 4th-function valve with auxiliary levers		

Hydraulic System/Steering *(continued)*	824K Z-BAR / HIGH-LIFT	
Steering (conforms to ISO 5010)		
Type	Power, fully hydraulic	
Articulation Angle	80-deg. arc (40 deg. each direction)	
Turning Radius (measured to centerline of outside tire)	5.92 m (19 ft. 5 in.)	
Hydraulic Cycle Times	*Z-Bar*	*High-Lift*
Raise	5.9 sec.	6.0 sec.
Dump	1.3 sec.	1.3 sec.
Lower (float down)	2.5 sec.	2.6 sec.
Total	9.7 sec.	9.9 sec.

Dimensions and Specifications with Pin-On Bucket



824K Z-BAR AND HIGH-LIFT LOADERS WITH PIN-ON BUCKET

	Z-Bar	*Z-Bar*	*High-Lift*	*High-Lift*
Dimensions with Bucket	*4.6-m³ (6.0 cu. yd.) general-purpose with bolt-on edge*	*5.2-m³ (6.75 cu. yd.) light-material with bolt-on edge*	*4.6-m³ (6.0 cu. yd.) general-purpose with bolt-on edge*	*4.6-m³ (6.0 cu. yd.) general-purpose with teeth and segments*
A Height to Top of Cab and Canopy	3.55 m (11 ft. 8 in.)	3.55 m (11 ft. 8 in.)	3.55 m (11 ft. 8 in.)	3.55 m (11 ft. 8 in.)
B Hood Height	2.70 m (8 ft. 10 in.)	2.70 m (8 ft. 10 in.)	2.70 m (8 ft. 10 in.)	2.70 m (8 ft. 10 in.)
C Ground Clearance	462 mm (18.2 in.)	462 mm (18.2 in.)	462 mm (18.2 in.)	462 mm (18.2 in.)
D Length from Centerline to Front Axle	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)	1.70 m (5 ft. 7 in.)
E Wheelbase	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. 4 in.)
F Overall Length, Bucket on Ground	9.26 m (30 ft. 5 in.)	9.38 m (30 ft. 9 in.)	9.77 m (32 ft. 1 in.)	9.95 m (32 ft. 8 in.)
G Height to Hinge Pin, Fully Raised	4.48 m (14 ft. 9 in.)	4.48 m (14 ft. 9 in.)	4.85 m (15 ft. 11 in.)	4.85 m (15 ft. 11 in.)
H Dump Clearance, 45 deg., Full Height	3.19 m (10 ft. 6 in.)	3.12 m (10 ft. 3 in.)	3.63 m (11 ft. 11 in.)	3.52 m (11 ft. 7 in.)
I Reach, 45-deg. Dump, Full Height	1.28 m (4 ft. 2 in.)	1.36 m (4 ft. 6 in.)	1.63 m (5 ft. 4 in.)	1.77 m (5 ft. 10 in.)
J Reach, 45-deg. Dump, 2.13-m (7 ft. 0 in.) Clearance	2.05 m (6 ft. 9 in.)	2.09 m (6 ft. 10 in.)	2.50 m (8 ft. 2 in.)	2.58 m (8 ft. 5 in.)
K Maximum Digging Depth	115 mm (4.5 in.)	115 mm (4.5 in.)	196 mm (7.7 in.)	196 mm (7.7 in.)
L Maximum Rollback at Ground Level	45.5 deg.	45.5 deg.	45.5 deg.	45.5 deg.
M Maximum Rollback, Boom Fully Raised	52 deg.	52 deg.	53 deg.	53 deg.
N Maximum Bucket Dump Angle, Fully Raised	44.1 deg.	44.1 deg.	39.8 deg.	39.8 deg.
Loader Clearance Circle, Bucket Carry Position	14.14 m (46 ft. 5 in.)	14.20 m (46 ft. 7 in.)	14.68 m (48 ft. 2 in.)	14.81 m (48 ft. 7 in.)
Specifications with Bucket				
Capacity, Heaped	4.6 m³ (6.0 cu. yd.)	5.2 m³ (6.75 cu. yd.)	4.6 m³ (6.0 cu. yd.)	4.6 m³ (6.0 cu. yd.)
Capacity, Struck	4.0 m³ (5.25 cu. yd.)	4.4 m³ (5.8 cu. yd.)	4.0 m³ (5.25 cu. yd.)	4.0 m³ (5.25 cu. yd.)
Bucket Weight with Bolt-On Cutting Edge	2788 kg (6,146 lb.)	2908 kg (6,411 lb.)	2788 kg (6,146 lb.)	2914 kg (6,423 lb.)
Bucket Width	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)
Breakout Force	18 718 kg (41,266 lb.)	17 310 kg (38,163 lb.)	17 534 kg (38,655 lb.)	17 437 kg (38,443 lb.)
Tipping Load, Straight	20 369 kg (44,907 lb.)	20 082 kg (44,274 lb.)	17 105 kg (37,711 lb.)	16 994 kg (37,465 lb.)
Tipping Load, 40-deg. Full Turn	17 481 kg (38,538 lb.)	17 213 kg (37,949 lb.)	14 593 kg (32,172 lb.)	14 527 kg (32,027 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load (conforms to ISO 14397-1)*	8741 kg (19,270 lb.)	8606 kg (18,974 lb.)	7295 kg (16,086 lb.)	7263 kg (16,013 lb.)
Operating Weight	26 501 kg (58,425 lb.)	26 625 kg (58,698 lb.)	26 889 kg (59,279 lb.)	26 973 kg (59,465 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PSX 6135 (EPA Interim Tier 4/EU Stage IIIB) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

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

Adjustments to Operating Weights and Tipping Loads with Buckets — 824K Z-BAR / HIGH-LIFT

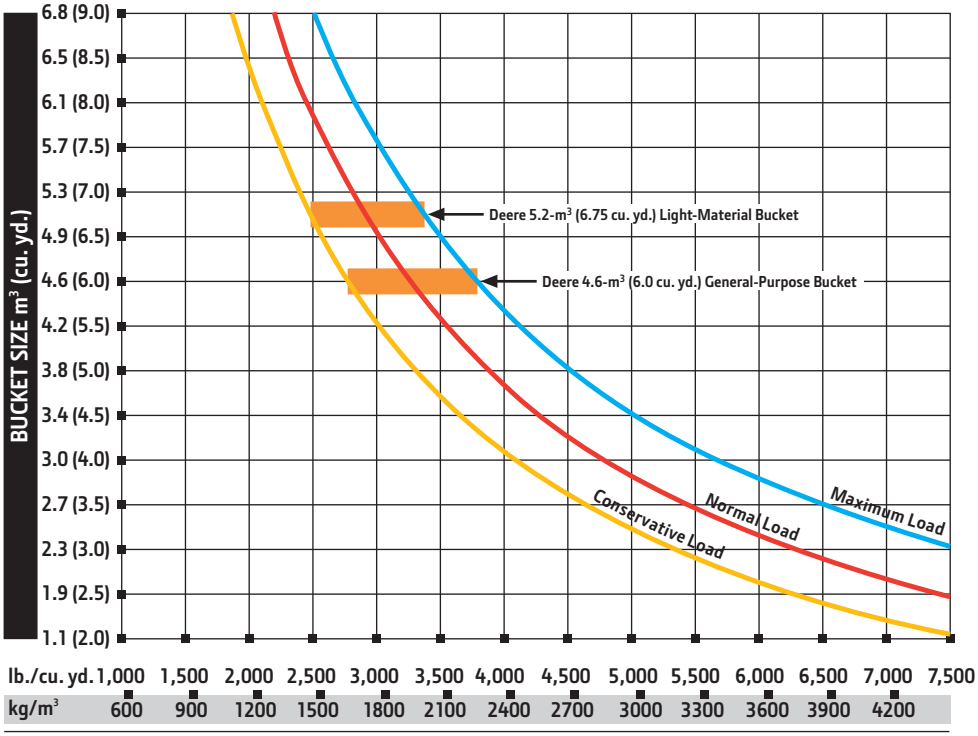
Adjustments to operating weights, tipping loads, and tires are based on Z-bar machine with pin-on 4.6-m³ (6.0 cu. yd.) general-purpose bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator*

Add (+) or deduct (–) kg (lb.) as indicated for loaders with 3-piece rims	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 40-deg. Full Turn SAE*	*Tread Width*	*Width Over Tires*	*Vertical Height*
John Deere PowerTech PSX 6135	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	N/A	N/A	N/A
John Deere PowerTech Plus 6135H	+67 kg (+147 lb.)	+258 kg (+569 lb.)	+208 kg (+459 lb.)	N/A	N/A	N/A
John Deere PowerTech 6135H	+67 kg (+147 lb.)	+258 kg (+569 lb.)	+208 kg (+459 lb.)	N/A	N/A	N/A
Michelin 26.5 R 25, 2 Star L-3	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Titan 26.5 R 25, 1 Star L-3	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Goodyear 26.5 R 25, 1 Star L-3	–56 kg (–123 lb.)	–40 kg (–88 lb.)	–35 kg (–77 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Firestone 26.5-25, 20-Ply L-3	–360 kg (–794 lb.)	–256 kg (–565 lb.)	–226 kg (–498 lb.)	0 mm (0 in.)	–5 mm (–0.2 in.)	+36 mm (+1.4 in.)
Firestone 26.5-25, 20-Ply L-5[ß]	+312 kg (+688 lb.)	+222 kg (+490 lb.)	+196 kg (+432 lb.)	0 mm (0 in.)	–20 mm (–0.8 in.)	+60 mm (+2.4 in.)
Michelin 29.5 R 25, 2 Star L-3[ß]	+604 kg (+1,332 lb.)	+430 kg (+949 lb.)	+379 kg (+836 lb.)	0 mm (0 in.)	+82 mm (+3.2 in.)	+70 mm (+2.8 in.)
Titan 29.5 R 25, 1 Star L-3[ß]	+664 kg (+1,464 lb.)	+473 kg (+1,043 lb.)	+417 kg (+919 lb.)	0 mm (0 in.)	+58 mm (+2.3 in.)	+78 mm (+3.1 in.)
Bridgestone 29.5 R 25, 1 Star L-3[ß]	+720 kg (+1,587 lb.)	+513 kg (+1,131 lb.)	+452 kg (+996 lb.)	0 mm (0 in.)	+71 mm (+2.8 in.)	+76 mm (+3.0 in.)

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

[ß]*Requires 8-deg. rear axle stops.*

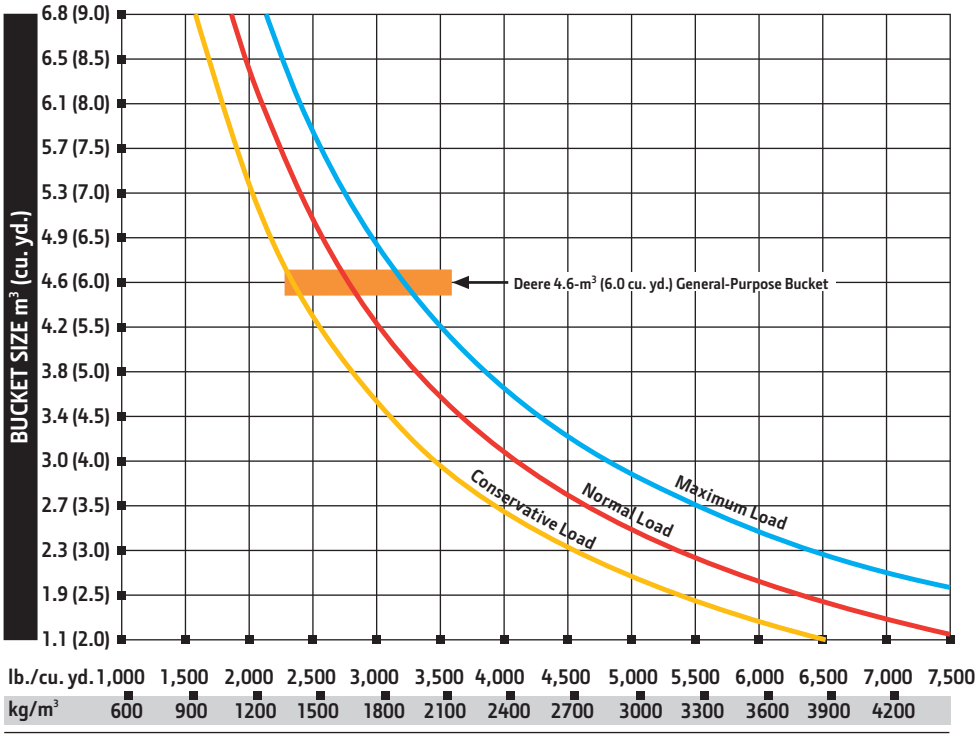
Bucket Selection Guides* — 824K Z-BAR



824K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486
Cinders (coal, ashes, clinkers)	673	1,134
Clay and gravel, dry	1602	2,700
Clay, compact, solid	1746	2,943
Clay, dry in lump loose	1009	1,701
Clay, excavated in water	1282	2,160
Coal, anthracite, broken, loose	865	1,458
Coal, bituminous, moderately wet	801	1,350
Earth, common loam, dry	1218	2,052
Earth, mud, packed	1843	3,105
Granite, broken	1538	2,592
Gypsum	2275	3,834
Limestone, coarse, sized	1570	2,646
Limestone, mixed sizes	1682	2,835
Limestone, pulverized or crushed	1362	2,295
Sand, damp	2083	3,510
Sand, dry	1762	2,970
Sand, voids, full of water	2083	3,510
Sandstone, quarried	1314	2,214
Shale, broken crushed	1362	2,295
Slag, furnace granulated	1955	3,294
Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Stone or gravel, 18.75-mm (3/4") size	1602	2,700

* 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	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486
Cinders (coal, ashes, clinkers)	673	1,134
Clay and gravel, dry	1602	2,700
Clay, compact, solid	1746	2,943
Clay, dry in lump loose	1009	1,701
Clay, excavated in water	1282	2,160
Coal, anthracite, broken, loose	865	1,458
Coal, bituminous, moderately wet	801	1,350
Earth, common loam, dry	1218	2,052
Earth, mud, packed	1843	3,105
Granite, broken	1538	2,592
Gypsum	2275	3,834
Limestone, coarse, sized	1570	2,646
Limestone, mixed sizes	1682	2,835
Limestone, pulverized or crushed	1362	2,295
Sand, damp	2083	3,510
Sand, dry	1762	2,970
Sand, voids, full of water	2083	3,510
Sandstone, quarried	1314	2,214
Shale, broken crushed	1362	2,295
Slag, furnace granulated	1955	3,294
Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Stone or gravel, 18.75-mm (3/4") size	1602	2,700

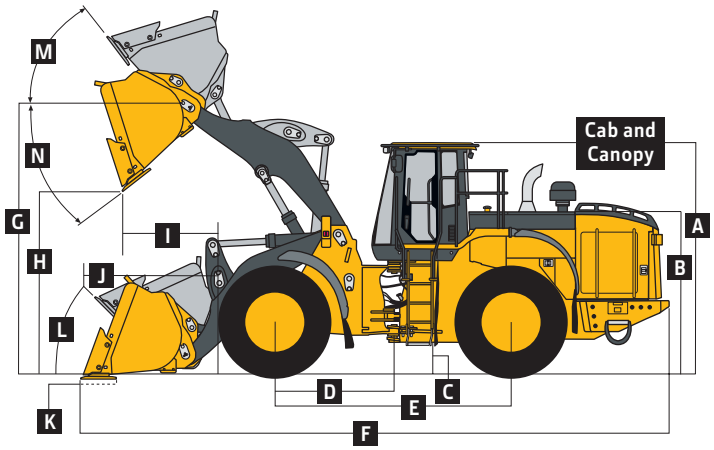
* This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. 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.

844K-II

Engine	844K-II Z-BAR		
Manufacturer and Model	John Deere PowerTech™ PSX 6135	John Deere PowerTech™ Plus 6135H	John Deere PowerTech™ 6135H
Non-Road Emission Standard	EPA Interim Tier 4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Cylinders	6	6	6
Valves Per Cylinder	4	4	4
Displacement	13.5 L (824 cu. in.)	13.5 L (824 cu. in.)	13.5 L (824 cu. in.)
Net Peak Power (ISO 9249)	283 kW (380 hp) at 1,600 rpm	283 kW (380 hp) at 1,600 rpm	283 kW (380 hp) at 1,600 rpm
Net Peak Torque (ISO 9249)	1793 Nm (1,323 lb.-ft.) at 900 rpm	1793 Nm (1,323 lb.-ft.) at 900 rpm	1793 Nm (1,323 lb.-ft.) at 900 rpm
Net Torque Rise	44%	44%	44%
Fuel System	Mechanically actuated electronic unit injectors	Mechanically actuated electronic unit injectors	Mechanically actuated electronic unit injectors
Lubrication	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler	Full-flow spin-on filter and integral cooler
Aspiration	Series turbocharged, charge air cooled	Turbocharged, charge air cooled	Turbocharged, charge air cooled
Air Cleaner	Dual-element dry type, restriction indicator in cab monitor for service	Dual-element dry type, restriction indicator in cab monitor for service	Dual-element dry type, restriction indicator in cab monitor for service
Fan Drive	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers	Hydraulically driven, proportionally controlled, fan aft of coolers
Electrical System	24 volt with 100-amp (130-amp optional) alternator	24 volt with 100-amp alternator	24 volt with 100-amp alternator
Batteries (2 – 12 volt)	1,400 CCA (each)	1,400 CCA (each)	1,400 CCA (each)
Transmission System			
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 2 selectable modes: kick-down or kick-up/down; and 3 adjustable clutch-cutoff settings		
	Standard 5-Speed with Lockup Torque Converter		*Optional 4-Speed*
Maximum Travel Speeds (with 29.5 R 25, 1 Star L3 tires)	*Forward*	*Reverse*	*Forward* / *Reverse*
Range 1	7.9 km/h (4.9 mph)	7.9 km/h (4.9 mph)	6.6 km/h (4.1 mph) / 6.6 km/h (4.1 mph)
Range 2	13.5 km/h (8.4 mph)	13.1 km/h (8.1 mph)	12.2 km/h (7.6 mph) / 12.2 km/h (7.6 mph)
Range 3	20.9 km/h (13.0 mph)	30.7 km/h (19.1 mph)	18.8 km/h (11.7 mph) / 27.3 km/h (17.0 mph)
Range 4	30.7 km/h (19.1 mph)	N/A	40.5 km/h (25.2 mph) / N/A
Range 5	40.0 km/h (24.9 mph)	N/A	N/A / N/A
Axles/Brakes			
Final Drives	Heavy-duty mid-board planetary		
Differentials	Hydraulic locking front with conventional rear – standard; dual locking front and rear – optional		
Rear Axle Oscillation, Stop to Stop (with 29.5 R 25, 1 Star L3 tires)	26 deg. (13 deg. each direction)		
Service Brakes (conform to ISO 3450)	Outboard, forced oil cooled, multi disc		
Parking Brakes (conform to ISO 3450)	Automatic spring applied, hydraulically released, sealed wet multi disc		
Tires/Wheels *(see page 32 for complete tire adjustments)*			
	Tread Width	*Width Over Tires*	
Bridgestone 875/65R29, 1 Star L-3	2440 mm (96.1 in.)	3420 mm (134.6 in.)	
Serviceability			
Refill Capacities	EPA IT4/EU Stage IIIB	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Fuel Tank (with ground-level fueling)	559 L (148 gal.)	553 L (146 gal.)	553 L (146 gal.)
Cooling System	74.9 L (79.1 qt.)	52.4 L (55.4 qt.)	52.4 L (55.4 qt.)
Engine Oil with Vertical Spin-On Filter	40 L (40 qt.)	36 L (38 qt.)	36 L (38 qt.)
Transmission Fluid with Vertical Filter	28 L (29.5 qt.)	28 L (29.5 qt.)	28 L (29.5 qt.)
Axle Oil (front and rear, each)	68 L (72 qt.)	68 L (72 qt.)	68 L (72 qt.)
Hydraulic Reservoir and Filter	242 L (64 gal.)	242 L (64 gal.)	242 L (64 gal.)
Park Brake Oil (wet disc)	0.7 L (24 oz.)	0.7 L (24 oz.)	0.7 L (24 oz.)
Hydraulic System/Steering			
Pump (loader and steering)	2 variable-displacement, load-sensing axial-piston pumps; closed-center system		
Maximum Rated Flow at 6895 kPa (1,000 psi) and 2,350 rpm	621 L/m (164 gpm)		
System Relief Pressure (loader and steering)	24 132 kPa (3,500 psi)		
Loader Controls	2-function valve; single- or dual-lever controls; control lever lockout feature; optional 3rd- and 4th-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)		
Turning Radius (measured to centerline of outside tire)	6.30 m (20 ft. 8 in.)		

Hydraulic System/Steering *(continued)*	844K-II Z-BAR
Hydraulic Cycle Times	*Z-Bar*
Raise	5.9 sec.
Dump	1.9 sec.
Lower (float down)	3.5 sec.
Total	11.3 sec.

Dimensions and Specifications with Pin-On Bucket



844K-II Z-BAR LOADER WITH PIN-ON BUCKET

	Z-Bar	*Z-Bar*	*Z-Bar*	*Z-Bar*	*Z-Bar*	*Z-Bar*
Dimensions with Bucket	*5.5-m³ (7.25 cu. yd.) general-purpose with bolt-on edge, without wear inserts*	*5.5-m³ (7.25 cu. yd.) general-purpose with bolt-on edge and wear inserts*	*6.2-m³ (8.1 cu. yd.) light-material with bolt-on edge and optional spillguard,* without wear inserts*	*6.2-m³ (8.1 cu. yd.) light-material with bolt-on edge, optional spillguard,* and wear inserts*	*4.8-m³ (6.3 cu. yd.) spade-nose rock with teeth, segments, spillguard, and wear inserts*	*4.8-m³ (6.3 cu. yd.) spade-nose rock with bolt-on edge, spillguard, and wear inserts*
A Height to Top of Cab and Canopy	3.76 m (12 ft. 4 in.)	3.76 m (12 ft. 4 in.)	3.76 m (12 ft. 4 in.)	3.76 m (12 ft. 4 in.)	3.76 m (12 ft. 4 in.)	3.76 m (12 ft. 4 in.)
B Hood Height	2.74 m (9 ft. 0 in.)	2.74 m (9 ft. 0 in.)	2.74 m (9 ft. 0 in.)	2.74 m (9 ft. 0 in.)	2.74 m (9 ft. 0 in.)	2.74 m (9 ft. 0 in.)
C Ground Clearance	463 mm (18.2 in.)	463 mm (18.2 in.)	463 mm (18.2 in.)	463 mm (18.2 in.)	463 mm (18.2 in.)	463 mm (18.2 in.)
D Length from Centerline to Front Axle	1.85 m (6 ft. 1 in.)	1.85 m (6 ft. 1 in.)	1.85 m (6 ft. 1 in.)	1.85 m (6 ft. 1 in.)	1.85 m (6 ft. 1 in.)	1.85 m (6 ft. 1 in.)
E Wheelbase	3.70 m (12 ft. 2 in.)	3.70 m (12 ft. 2 in.)	3.70 m (12 ft. 2 in.)	3.70 m (12 ft. 2 in.)	3.70 m (12 ft. 2 in.)	3.70 m (12 ft. 2 in.)
F Overall Length, Bucket on Ground	9.65 m (31 ft. 8 in.)	9.65 m (31 ft. 8 in.)	9.72 m (31 ft. 11 in.)	9.72 m (31 ft. 11 in.)	10.06 m (33 ft. 0 in.)	9.83 m (32 ft. 3 in.)
G Height to Hinge Pin, Fully Raised	4.62 m (15 ft. 2 in.)	4.62 m (15 ft. 2 in.)	4.62 m (15 ft. 2 in.)	4.62 m (15 ft. 2 in.)	4.62 m (15 ft. 2 in.)	4.62 m (15 ft. 2 in.)
H Dump Clearance, 45 deg., Full Height	3.32 m (10 ft. 11 in.)	3.32 m (10 ft. 11 in.)	3.27 m (10 ft. 9 in.)	3.27 m (10 ft. 9 in.)	3.05 m (10 ft. 0 in.)	3.21 m (10 ft. 6 in.)
I Reach, 45-deg. Dump, Full Height	1.49 m (4 ft. 11 in.)	1.49 m (4 ft. 11 in.)	1.54 m (5 ft. 1 in.)	1.54 m (5 ft. 1 in.)	1.80 m (5 ft. 11 in.)	1.64 m (5 ft. 4 in.)
J Reach, 45-deg. Dump, 2.13-m (7 ft. 0 in.) Clearance	2.28 m (7 ft. 6 in.)	2.28 m (7 ft. 6 in.)	2.31 m (7 ft. 7 in.)	2.31 m (7 ft. 7 in.)	2.47 m (8 ft. 1 in.)	2.38 m (7 ft. 10 in.)
K Maximum Digging Depth	93 mm (3.7 in.)	93 mm (3.7 in.)	93 mm (3.7 in.)	93 mm (3.7 in.)	93 mm (3.7 in.)	93 mm (3.7 in.)
L Maximum Rollback at Ground Level	40.5 deg.	40.5 deg.	40.5 deg.	40.5 deg.	40.5 deg.	40.5 deg.
M Maximum Rollback, Boom Fully Raised	56.3 deg.	56.3 deg.	56.3 deg.	56.3 deg.	56.3 deg.	56.3 deg.
N Maximum Bucket Dump Angle, Fully Raised	55.2 deg.	55.2 deg.	55.2 deg.	55.2 deg.	55.2 deg.	55.2 deg.
Loader Clearance Circle, Bucket Carry Position	15.92 m (52 ft. 3 in.)	15.92 m (52 ft. 3 in.)	15.97 m (52 ft. 5 in.)	15.97 m (52 ft. 5 in.)	15.89 m (52 ft. 2 in.)	15.86 m (52 ft. 0 in.)
Specifications with Bucket						
Capacity, Heaped	5.5 m³ (7.25 cu. yd.)	5.5 m³ (7.25 cu. yd.)	6.2 m³ (8.1 cu. yd.)	6.2 m³ (8.1 cu. yd.)	4.8 m³ (6.3 cu. yd.)	4.8 m³ (6.3 cu. yd.)
Capacity, Struck	4.7 m³ (6.2 cu. yd.)	4.7 m³ (6.2 cu. yd.)	5.6 m³ (7.3 cu. yd.)	5.6 m³ (7.3 cu. yd.)	4.1 m³ (5.4 cu. yd.)	4.1 m³ (5.4 cu. yd.)
Bucket Weight with Bolt-On Cutting Edge	3515 kg (7,748 lb.)	3759 kg (8,288 lb.)	3741 kg (8,247 lb.)	3998 kg (8,813 lb.)	4260 kg (9,392 lb.)	4124 kg (9,092 lb.)
Bucket Width	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. 4 in.)	3.49 m (11 ft. 6 in.)	3.49 m (11 ft. 6 in.)
Breakout Force	21 674 kg (47,782 lb.)	21 568 kg (47,549 lb.)	20 550 kg (45,305 lb.)	20 449 kg (45,083 lb.)	16 680 kg (41,183 lb.)	19 222 kg (42,376 lb.)
Tipping Load, Straight	25 697 kg (56,651 lb.)	25 399 kg (55,996 lb.)	25 223 kg (55,607 lb.)	24 941 kg (54,985 lb.)	24 933 kg (54,968 lb.)	25 118 kg (55,376 lb.)
Tipping Load, 40-deg. Full Turn	22 094 kg (48,708 lb.)	21 796 kg (48,053 lb.)	21 656 kg (47,743 lb.)	21 374 kg (47,122 lb.)	21 312 kg (46,984 lb.)	21 497 kg (47,392 lb.)
Rated Operating Load, 50% Full-Turn Tipping Load (conforms to ISO 14397-1)*	11 047 kg (24,354 lb.)	10 898 kg (24,026 lb.)	10 828 kg (23,872 lb.)	10 687 kg (23,561 lb.)	10 656 kg (23,492 lb.)	10 748 kg (23,696 lb.)
Operating Weight	34 152 kg (75,292 lb.)	34 431 kg (75,906 lb.)	34 384 kg (75,804 lb.)	34 646 kg (76,382 lb.)	34 905 kg (76,953 lb.)	34 776 kg (76,668 lb.)

Loader operating information is based on machine with identified linkage and standard equipment, PowerTech PSX 6135 (EPA Interim Tier 4/EU Stage IIIB) engine, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 79-kg (175 lb.) operator. This information is affected by changes in tires, ballast, and different attachments, and assumes no tire deflection per the standard ISO 14397-1 section 5.

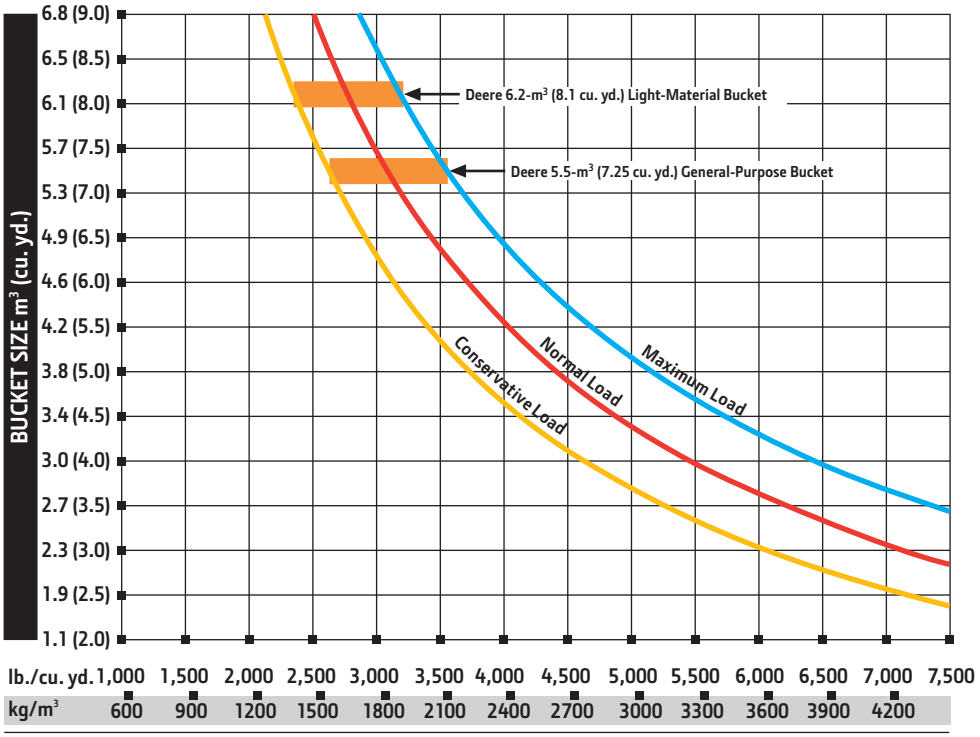
**Rated operating capacity based on Deere attachments only.*

Adjustments to Operating Weights and Tipping Loads with Buckets	844K-II Z-BAR					
Adjustments to operating weights, tipping loads, and tires are based on Z-bar machine with pin-on 5.5-m³ (5.25 cu. yd.) 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 79-kg (175 lb.) operator*						
Add (+) or deduct (–) kg (lb.) as indicated for loaders with 3-piece rims	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, 40-deg. Full Turn SAE*	*Tread Width*	*Width Over Tires*	*Vertical Height*
John Deere PowerTech PSX 6135	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	N/A	N/A	N/A
John Deere PowerTech Plus 6135H	–90 kg (–198 lb.)	+59 kg (+130 lb.)	+30 kg (+66 lb.)	N/A	N/A	N/A
John Deere PowerTech 6135H	–90 kg (–198 lb.)	+59 kg (+130 lb.)	+30 kg (+66 lb.)	N/A	N/A	N/A
Bridgestone 875/65R29, 1 Star L-3[ß]	0 kg (0 lb.)	0 kg (0 lb.)	0 kg (0 lb.)	0 mm (0 in.)	0 mm (0 in.)	0 mm (0 in.)
Michelin 29.5 R 25, 1 Star L-3	–840 kg (–1,852 lb.)	–691 kg (–1,524 lb.)	–603 kg (–1,329 lb.)	0 mm (0 in.)	–110 mm (–4.3 in.)	–11 mm (–0.4 in.)
Titan 29.5 R 25, 1 Star L-3	–780 kg (–1,720 lb.)	–642 kg (–1,415 lb.)	–560 kg (–1,234 lb.)	0 mm (0 in.)	–122 mm (–4.8 in.)	–11 mm (–0.4 in.)
Bridgestone 29.5 R 25, 1 Star L-3	–724 kg (–1,596 lb.)	–596 kg (–1,314 lb.)	–519 kg (–1,145 lb.)	0 mm (0 in.)	–110 mm (–4.3 in.)	–6 mm (–0.2 in.)
Firestone 29.5-25, 28-Ply L-5	–348 kg (–767 lb.)	–286 kg (–631 lb.)	–250 kg (–550 lb.)	0 mm (0 in.)	–101 mm (–4.0 in.)	–22 mm (–0.9 in.)
Bridgestone 29.5 R 25, 1 Star L-5[ß]	+512 kg (+1,129 lb.)	+421 kg (+929 lb.)	+367 kg (+810 lb.)	0 mm (0 in.)	–99 mm (–3.9 in.)	+30 mm (+1.2 in.)
Michelin 29.5 R 25, 1 Star L-3[ß]	–32 kg (–71 lb.)	–26 kg (–58 lb.)	–23 kg (–51 lb.)	0 mm (0 in.)	–115 mm (–4.5 in.)	+10 mm (+0.4 in.)

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

[ß]*Requires 8-deg. rear axle stops.*

Bucket Selection Guides* 844K-II Z-BAR



844K Z-BAR LOADER WITH PIN-ON BUCKET

LOOSE MATERIALS	kg/m³	lb./cu. yd.
Chips, pulpwood	288	486
Cinders (coal, ashes, clinkers)	673	1,134
Clay and gravel, dry	1602	2,700
Clay, compact, solid	1746	2,943
Clay, dry in lump loose	1009	1,701
Clay, excavated in water	1282	2,160
Coal, anthracite, broken, loose	865	1,458
Coal, bituminous, moderately wet	801	1,350
Earth, common loam, dry	1218	2,052
Earth, mud, packed	1843	3,105
Granite, broken	1538	2,592
Gypsum	2275	3,834
Limestone, coarse, sized	1570	2,646
Limestone, mixed sizes	1682	2,835
Limestone, pulverized or crushed	1362	2,295
Sand, damp	2083	3,510
Sand, dry	1762	2,970
Sand, voids, full of water	2083	3,510
Sandstone, quarried	1314	2,214
Shale, broken crushed	1362	2,295
Slag, furnace granulated	1955	3,294
Stone or gravel, 37.5 to 87.5-mm (1.5 to 3.5") size	1442	2,430
Stone or gravel, 18.75-mm (3/4") size	1602	2,700

* 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.

Additional equipment

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

724	744	824	844	Engine
●	●	●	●	Wet-sleeve cylinder liners
●	●	●	●	Programmable auto-idle and auto shutdown
●	●	●	●	Selected idle adjustment from 900–1,250 rpm
●	●	●	●	Starter protection
●	●	●	●	Automatic turbo cool-down/shutdown timer†
●	●	●	●	Automatic derating for exceeded system temperatures
●	●	●	●	Serpentine drive belt for automatic tensioner
●	●	●	●	Electrical fuel-priming pump
●	●	●	●	Dual-stage fuel filter and water separator
●	●	●	●	500-hour vertical spin-on oil filter
●	●	●	●	Engine-compartment light
▲	▲	▲	▲	Chrome exhaust stack
▲	▲	▲	▲	Automatic ether starting aid (recommended for cold starts below –12 deg. C [10 deg. F])
▲	▲	▲	▲	Engine-block heater (recommended for cold starts below –23 deg. C [–10 deg. F])
▲	▲	●	●	Centrifugal engine air pre-cleaner
				Powertrain
●	●	●	●	Programmable maximum high gear
●	●	●	●	Clutch calibration engaged from monitor
●	●	●	●	2,000-hour vertical spin-on transmission filter
●	●	●	●	Transmission diagnostic ports
●	●	●	●	5-speed transmission with lockup torque converter
▲	▲	▲	▲	4-speed transmission with non-lockup torque converter
●	●	●	▲	Front locking differential
▲	▲	▲	▲	Rear locking differential
▲	▲	▲	▲	Automatic differential lock
●	●	●	●	Axle oil temperature sensing
●	●	●	●	Wheel-spin control
				Quad-Cool™ Cooling System
●	●	●	●	Heavy-duty, trash-resistant radiator and high-ambient cooling package
●	●	●	●	2-side access to all coolers
●	●	●	●	Isolated from engine compartment
●	●	●	●	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, –37 deg. C (–34 deg. F)
●	●	●	●	Cool-on-demand swing-out fan
●	●	●	●	Enclosed fan safety guard
▲	▲	▲	●	Automatic reversing fan drive
▲	●	●	●	Axle and service-brake coolers
▲	▲	▲	▲	Corrosive-environment coolers
				Hydraulics
●	●	●	●	Automatic return-to-dig bucket positioner
●	●	●	●	In-cab adjustable automatic boom-height kickout/return to carry
●	●	●	●	Reservoir with sight gauge and fill strainer

724	744	824	844	Hydraulics *(continued)*
●	●	●	●	Hydraulic diagnostic ports
●	●	●	●	4,000-hour in-tank filter
▲	▲	▲		2 function — joystick with F-N-R
▲	▲	▲	▲	2 function — joystick with steering column F-N-R
●	●	●	●	2 function — 2-lever fingertip controls and steering column F-N-R
▲	▲	▲		3 function — joystick with F-N-R and 3rd-function auxiliary lever
▲	▲	▲	▲	3 function — joystick with steering column F-N-R and 3rd-function auxiliary lever
▲	▲	▲	▲	3 function — 3-lever fingertip controls and steering column F-N-R
▲				4 function — 4-lever fingertip controls and steering column F-N-R
●	●	●	●	Ride control, automatic with monitor-adjustable speed settings
▲	▲	▲	▲	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
●	●	●	●	By-pass start safety cover at starter
●	●	●	●	Pre-wired for beacon/strobe light
●	●	●	●	Lights: Halogen driving lights with guards (2) / Front (4) and rear (2) cab work lights (724K) / Front (4), rear cab (2), and rear grille (2) work lights (744K, 824K, and 844K-II) / Turn signals and flashers (724K, 744K, and 824K) / LED stop- and taillights
▲	▲	▲	●	Heavy-duty LED turn signal and marker lights
▲	▲	▲	▲	Premium LED work, drive, and marker lights
●	●	●	●	Programmable courtesy lights
●	●	●	●	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 5 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
▲	▲	▲	▲	Electrical corrosion-prevention package
▲	▲	▲	▲	AM/FM/weather-band radio with CD player
●	●	●	●	24- to 12-volt, 8-amp converter

†*Available only with EPA Interim Tier 4/EU Stage IIIB engines.*

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions per ISO 9249. No derating is required up to 3050-m (10,000 ft.) altitude. Specifications and design subject to change without notice. Specifications with the exception of bucket capacity are in accordance with all applicable ISO standards. Except where otherwise noted, these specifications are based on 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 79-kg (175 lb.) operator.

Additional equipment

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

724	744	824	844	Operator's Station
●	●	●	●	Quiet Cab with air conditioning/heater
●	●	●	●	Keyless start with multiple security modes
●	●	●	●	Sealed-switch module with function indicators
●	●	●		Seat with backrest extension, deep foam, fabric cover, and adjustable air suspension
▲	▲	▲	●	Premium seat with high-wide back and headrest extension, heated, leather/fabric cover, and adjustable air suspension
●	●	●	●	Hydraulic controls integrated to seat
●	●	●	●	High-visibility, bright-orange seat belt, 76 mm (3 in.), with retractor
●	●	●	●	Cup holders (2)
●	●	●	●	Lunch-box/cooler holder
●	●	●	●	Dome and reading light (included with Quiet Cab)
●	●	●	●	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
▲	▲	▲	▲	Large heated outside mirrors
●	●	●	●	Left-side operator-station access
●	●	●	●	Slip-resistant steps and ergonomic handholds
●	●	●	●	Sun visor (Quiet Cab only)
●	●	●	●	Radio ready (Quiet Cab only)
●	●	●	●	Front and rear intermittent windshield wiper and washers
▲	▲	▲	▲	Powered cab air pre-cleaner
▲	▲	▲	▲	Beacon bracket
▲	▲	▲	▲	Rear camera and radar object-detection system
▲	▲	▲	▲	Embedded payload scale
▲	▲	▲	▲	Fire extinguisher
				Loader Linkage
●	●	●	●	Z-bar loader linkage
▲	▲	▲		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

724	744	824	844	Overall Vehicle
●	●	●	●	JDLink™ Ultimate wireless communication system (available in specific countries; see your dealer for details)
●	●	●		NeverGrease™ rear-axle oscillation
●	●	●	●	NeverGrease steering-cylinder joints
			●	Bushed pin joints (including static joints on bucket and steering cylinders)
●	●	●	●	Front and rear tie-downs (844K-II includes mid tie-downs)
●	●	●	●	Rear cast bumper with rear hitch and locking pin
●	●	●	●	Articulation locking bar
●	●	●		Loader boom service locking bar
●	●	●	●	40-deg. steering articulation to each side with rubber-cushion stops on frame
●	●	●	●	Vandal protection with lockable engine enclosures, right counterweight storage, 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 tires on 3-piece rims
▲				23.5R25 tires on 5-piece rims
	●	●		26.5R25 tires on 5-piece rims
		▲	●	29.5R25 tires on 5-piece rims
▲	▲	▲	▲	Waste handler (Z-bar and High-Lift)
▲	▲	▲	▲	NeverGrease linkage (Z-bar and High-Lift)
●	●	●	●	Level 1 sound package
▲	▲	●	●	Level 2 sound package
▲	▲	●	●	Transmission side-frame and bottom guards
▲	▲	▲	▲	Fast-fuel system
▲	▲	▲	▲	Quick fluid service (engine, transmission, hydraulic oils, and engine coolant)
▲	▲	▲	▲	Fenders, full-coverage, front
▲	▲	▲	▲	Fenders, full-coverage, front and rear
▲	▲			Less wheels and tires with axle stops
▲	▲			Rims less tires
▲	●	●	●	Lift eyes
▲	▲	▲	▲	License-plate bracket and light
▲	▲	▲	▲	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 ISO 9249. No derating is required up to 3050-m (10,000 ft.) altitude. Specifications and design subject to change without notice. Specifications with the exception of bucket capacity are in accordance with all applicable ISO standards. Except where otherwise noted, these specifications are based on 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 79-kg (175 lb.) operator.

JOHN DEERE

www.JohnDeere.com

DKAKPLDR Litho in U.S.A. (13-03)