

# 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			
	<i>Standard 4-Speed Transmission</i>		<i>5-Speed Transmission with Lockup Torque Converter</i>	
Travel Speeds (with 29.5 R 25, 1 Star L3 tires)	<i>Forward Maximum</i>	<i>Reverse Maximum</i>	<i>Forward Maximum</i>	<i>Reverse Maximum</i>
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)*	<i>Tread Width</i>	<i>Width Over Tires</i>	<i>Change In Vertical Height</i>
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

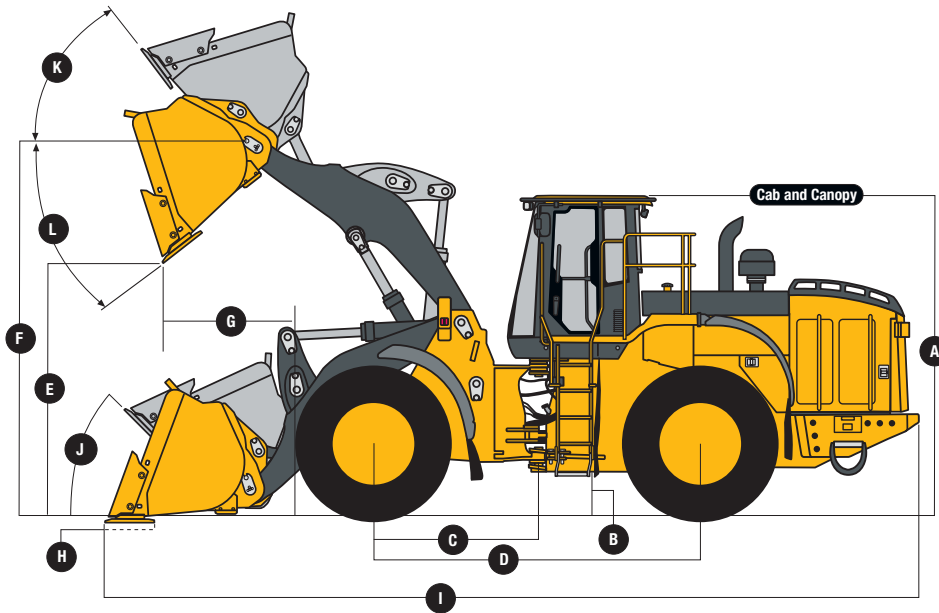
Pump (loader and steering)	two variable-displacement, load-sensing, axial-piston pumps; closed-center system
Maximum Rated Flow @ 1,000 psi (6895 kPa) and 2,250 rpm	164 gpm (621 L/m)
System Relief Pressure (loader and steering)	3,500 psi (24 132 kPa)
Loader Controls	two-function valve; single- or dual-lever 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	<b>Z-Bar</b>
Raise	6.3 sec.
Dump	1.9 sec.
Lower (float down)	3.5 sec.
Total	11.7 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<sup>3</sup>) pin-on bucket

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



844K Z-BAR LOADER

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

	<i>General-Purpose with Bolt-On Edge and Wear Inserts</i>	<i>General-Purpose with Bolt-On Edge, without Wear inserts</i>	<i>Light Material with Bolt-On Edge and Optional Spillguard, without Wear Inserts*</i>	<i>Light Material with Bolt-On Edge, Optional Spillguard, and Wear Inserts*</i>	<i>Spade-Nose Rock with Teeth, Segments, Spillguard, and Wear Inserts</i>	<i>Spade-Nose Rock with Bolt-On Edge, Spillguard, and Wear inserts</i>
Bucket Type/Size						
Capacity, Heaped	7.25 cu. yd. (5.5 m <sup>3</sup> )	7.25 cu. yd. (5.5 m <sup>3</sup> )	8.1 cu. yd. (6.2 m <sup>3</sup> )	8.1 cu. yd. (6.2 m <sup>3</sup> )	6.25 cu. yd. (4.6 m <sup>3</sup> )	6.25 cu. yd. (4.6 m <sup>3</sup> )
Capacity, Struck	6.2 cu. yd. (4.7 m <sup>3</sup> )	6.2 cu. yd. (4.7 m <sup>3</sup> )	7.3 cu. yd. (5.6 m <sup>3</sup> )	7.3 cu. yd. (5.6 m <sup>3</sup> )	5.4 cu. yd. (4.1 m <sup>3</sup> )	5.4 cu. yd. (4.1 m <sup>3</sup> )
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

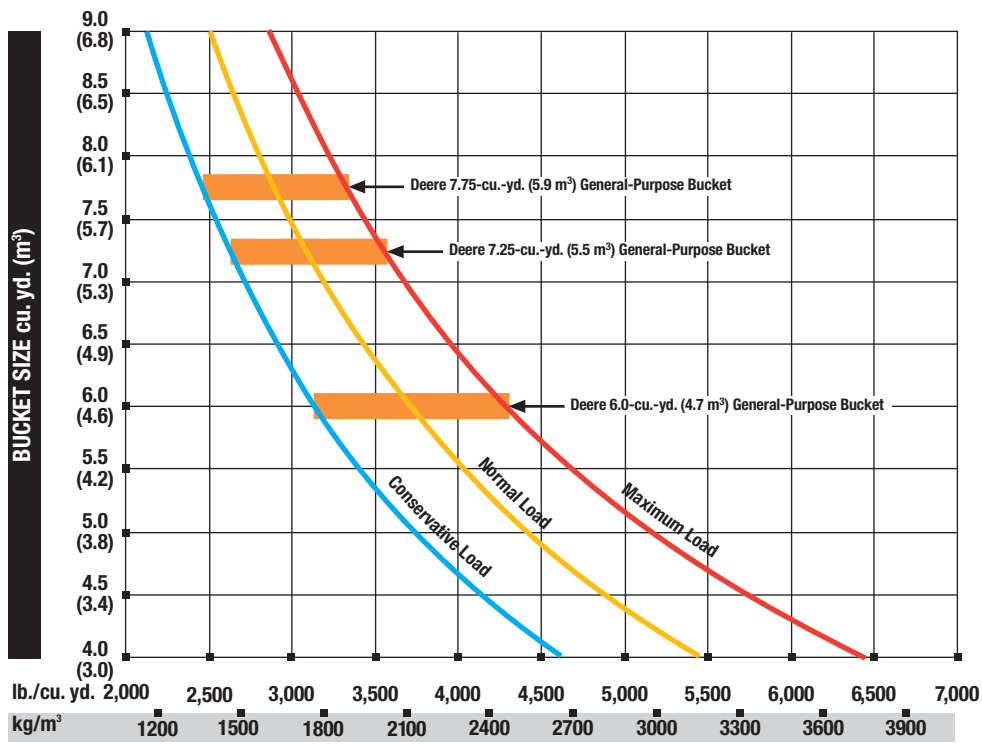
Adjustments to operating weights and tipping loads are based on Z-bar machine and pin-on 7.25-cu.-yd. (5.5 m<sup>3</sup>) general-purpose bucket with bolt-on cutting edge, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, and 175-lb.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

Add (+) or deduct (-) lb. (kg) as indicated for loaders with three-piece rims and	<i>Operating Weight</i>	<i>Tipping Load, Straight</i>	<i>Tipping Load, 37-Deg. Full Turn, SAE</i>	<i>Tipping Load, 40-Deg. Full Turn, SAE</i>
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 <sup>†</sup>	+ 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.*

*<sup>†</sup>74,000-lb. ROPS limit must not be exceeded.*

**Bucket Selection Guide\***



**844K LOADER WITH PIN-ON BUCKET**

MATERIAL (Loose weight)	lb./cu. yd.	kg/m <sup>3</sup>
Caliche	2,100	1250
Cinders	1,000	590
Clay and gravel, dry	2,400	1420
Clay and gravel, wet	2,600	1540
Clay, dry	2,500	1480
Clay, natural bed	2,800	1660
Clay, wet	2,800	1660
Coal, anthracite, broken	1,850	1100
Coal, bituminous, broken	1,400	830
Earth, dry, packed	2,550	1510
Earth, loam	2,100	1250
Earth, wet, excavated	2,700	1600
Granite, broken or large crushed	2,800	1660
Gravel, dry	2,550	1510
Gravel, dry 1/2" to 2" (13 to 50 mm)	2,850	1690
Gravel, pit run (graveled sand)	3,250	1930
Gravel, wet 1/2" to 2" (13 to 50 mm)	3,400	2020
Gypsum, crushed	2,700	1600
Limestone, broken or crushed	2,600	1540
Magnetite, iron ore	4,700	2790
Phosphate rock	2,160	1280
Pyrite, iron ore	4,350	2580
Sand and gravel, dry	2,900	1720
Sand and gravel, wet	3,400	2020
Sand, dry	2,400	1420
Sand, wet	3,100	1840
Sandstone, broken	2,550	1510
Shale	2,100	1250
Slag, broken	2,950	1750
Stone, crushed	2,700	1600
Topsoil	1,600	950

\* 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.