

Specifications

Engine 544J

Type	John Deere PowerTech 6068H; certified to EPA Tier 2 emissions
Cylinders	6
Valves Per Cylinder	2
Displacement	414 cu. in. (6.8 L)
Net Peak Power	160 hp (116 kW) @ 1,900 rpm
Net Rated Power	145 hp (100 kW) @ 2,200 rpm
Net Peak Torque	485 lb.-ft. (650 Nm) @ 1,400 rpm
Net Torque Rise	41%
Net Power Bulge	11%
Fuel System	electronically controlled rotary pump-line-nozzle
Lube System	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
Batteries (two 12 volt)	950 CCA

Transmission

Type	countershaft-type power shift	
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, kick-down button on hydraulic lever	
Shift Modes	auto/manual, auto to 1st or 2nd, kick down or kick up/down, three clutch cutoff settings adjustable on switch pad	
Travel Speeds*	<i>Forward</i>	<i>Reverse</i>
Gear 1	4.3 mph (6.9 km/h)	4.5 mph (7.3 km/h)
Gear 2	7.4 mph (11.9 km/h)	7.8 mph (12.6 km/h)
Gear 3	14.2 mph (22.8 km/h)	15.0 mph (24.1 km/h)
Gear 4	23.8 mph (38.4 km/h)	

*Equipped with 20.5-25 tires.

Axles/Brakes

Final Drives	heavy-duty inboard planetary
Differentials	hydraulic locking front, conventional rear — standard; dual locking front and rear — optional
Rear Axle Oscillation, Stop to Stop*	24 deg.
Brakes (conform to SAE J1473, ISO3450)	
Service Brakes	hydraulically actuated, inboard, carrier mounted, pressure oil cooled, self adjusting, multi-disc
Parking Brake	automatic spring applied, hydraulically released, oil cooled, multi-disc

*Equipped with 20.5-25 tires.

Tires

Choice of (with three-piece rims)	Tread Width	Width Over Tires	Change In Vertical Height
20.5R25 L-3	76.8 in. (1950 mm)	97.7 in. (2482 mm)	0 in. (0 mm)
20.5R25 L-2	76.8 in. (1950 mm)	97.7 in. (2482 mm)	+ 1.45 in. (+ 37 mm)
20.5-25 L-2	76.8 in. (1950 mm)	97.7 in. (2483 mm)	- 0.27 in. (- 7 mm)
20.5-25 L-3	76.8 in. (1950 mm)	97.9 in. (2488 mm)	- 0.04 in. (- 1 mm)
600/65R25 L-3	76.8 in. (1950 mm)	100.2 in. (2544 mm)	- 0.83 in. (- 21 mm)
23.1-26 Logger*	84.0 in. (2136 mm)	107.2 in. (2723 mm)	+ 1.9 in. (+ 48 mm)

*Equipped with one-piece rims.

Refill Capacities (U.S.)

Fuel Tank (with ground-level fueling)	85 gal. (322 L)
Cooling System	22 qt. (21 L)
Engine Lubrication, Including Full-Flow Spin-On Filter	19.5 qt. (18.5 L)
Powershift Transmission, Including Filter	19.5 qt. (18.5 L)

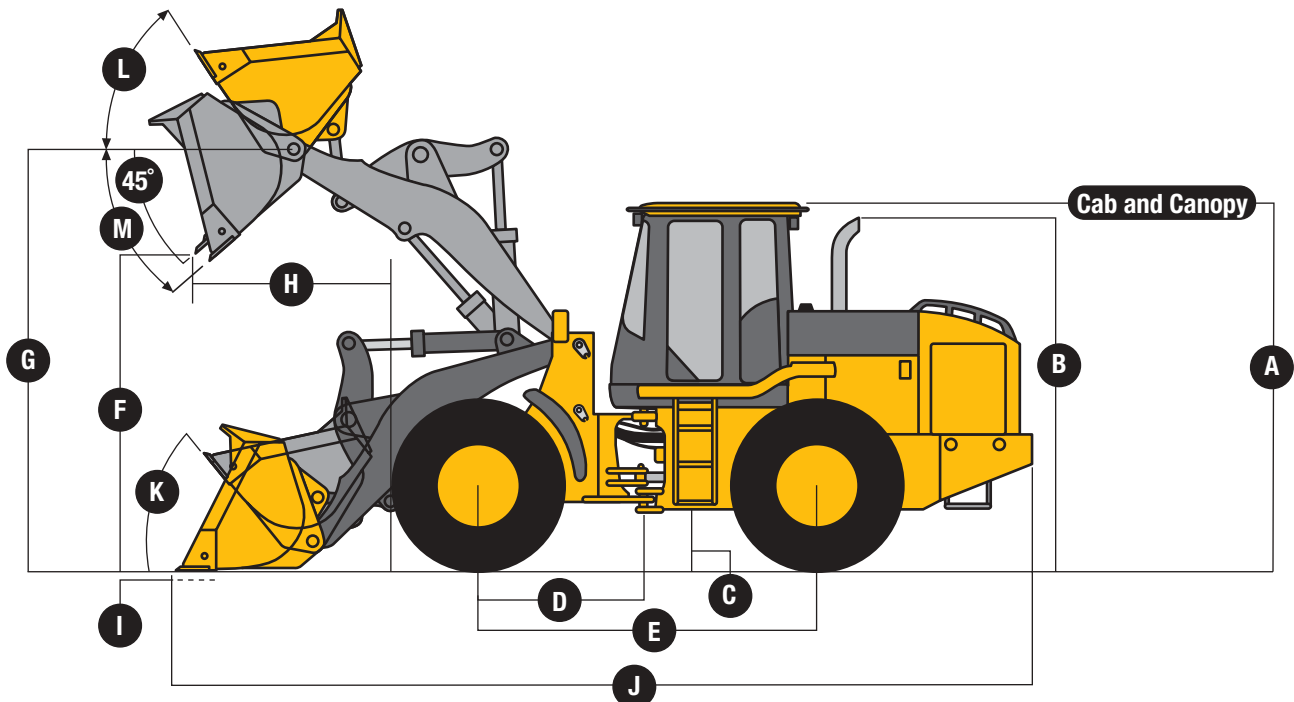
Differential (each axle)	
Front	19 qt. (18 L)
Rear	19 qt. (18 L)
Loader Hydraulic Reservoir and Filters	25.5 gal. (96.5 L)
Wet-Disc Parking Brake	10 oz. (0.3 L)

Hydraulic System/Steering

Pump (loader and steering)	variable-displacement, axial-piston pump; closed-center, pressure-compensating system	
Maximum Flow @ 2,350 rpm	50 gpm (189 L/m) @ 1,000 psi (6895 kPa)	
Pressure	loader and steering relief 3,650 psi (25 167 kPa)	
Loader Controls	two-function valve; single- or dual-lever controls; control lever lockout feature; optional third- and fourth-function valve with auxiliary lever	
Steering (conforms to SAE J1511)		
Type	power, fully hydraulic	
Pressure	3,650 psi (25 167 kPa) relief	
Articulation Angle	80-deg. arc (40 deg. each direction)	
Hydraulic Cycle Times	<i>Standard Z-Bar</i>	<i>High-Lift Z-Bar</i>
Raise	5.7 sec.	5.7 sec.
Dump	1.2 sec.	1.2 sec.
Lower	3.2 sec. (float down) / 3.3 sec. (power down)	3.2 sec. (float down) / 3.3 sec. (power down)
Total	10.1 sec.	10.1 sec.
Maximum Lift Capacity (with 2.5-cu.-yd. [1.9 m ³] bucket with bolt-on edge)		
Lift at Ground Level	29,596 lb. (13 422 kg)	26,074 lb. (11 835 kg)
Lift at Maximum Height	14,904 lb. (6759 kg)	12,996 lb. (5894 kg)
Turning Radius (measured to centerline of outside tire)	16 ft. 3 in. (4959 mm)	16 ft. 3 in. (4959 mm)

Dimensions with Pin-On Bucket

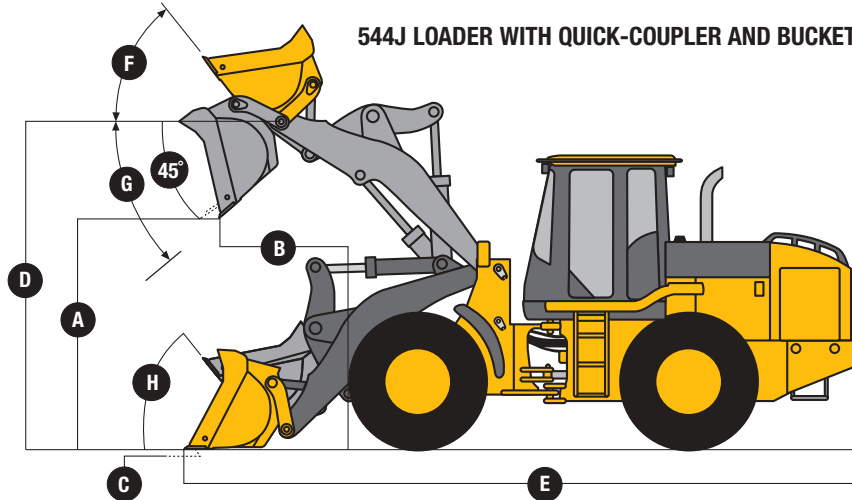
	<i>Standard Z-Bar</i>	<i>High-Lift Z-Bar</i>
A Height to Top of Cab and Canopy	10 ft. 7.6 in. (3241 mm)	10 ft. 7.6 in. (3241 mm)
B Height to Top of Exhaust	10 ft. 7.0 in. (3227 mm)	10 ft. 7.0 in. (3227 mm)
C Ground Clearance	17.7 in. (450.5 mm)	17.7 in. (450.5 mm)
D Length from Centerline to Front Axle	57.1 in. (1450 mm)	57.1 in. (1450 mm)
E Wheelbase	114.2 in. (2900 mm)	114.2 in. (2900 mm)
F Dump Clearance	(see page 23)	(see page 24)
G Height to Hinge Pin, Fully Raised	12 ft. 7 in. (3836 mm)	13 ft. 9 in. (4188 mm)
H Dump Reach	(see page 23)	(see page 24)
I Maximum Digging Depth	3.25 in. (83 mm)	6.5 in. (165 mm)
J Overall Length	(see page 23)	(see page 24)
K Maximum Rollback at Ground Level	41 deg.	41 deg.
L Maximum Rollback, Boom Fully Raised	55 deg.	55 deg.
M Maximum Bucket Angle, Fully Raised	50 deg.	50 deg.



Dimensions with Quick-Coupler and Bucket

	544J <i>Standard Z-Bar</i>	<i>High-Lift Z-Bar</i> (see page 24)
A Dump Clearance	(see page 23)	(see page 24)
B Dump Reach	(see page 23)	(see page 24)
C Maximum Digging Depth	5.5 in. (139 mm)	8.7 in. (221 mm)
D Height to Hinge Pin, Fully Raised	12 ft. 7 in. (3836 mm)	13 ft. 9 in. (4188 mm)
E Overall Length	(see page 23)	(see page 24)
F Maximum Rollback, Boom Fully Raised	55 deg.	49 deg.
G Maximum Bucket Discharge Angle, Fully Raised	55 deg.	51 deg.
H Maximum Rollback at Ground Level	42 deg.	41 deg.

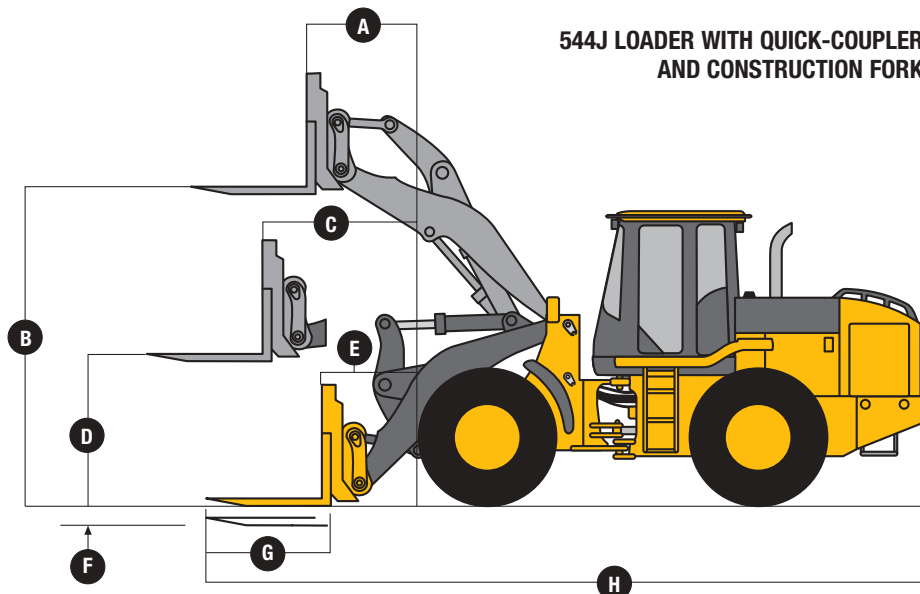
544J LOADER WITH QUICK-COUPLER AND BUCKET



Dimensions with Quick-Coupler and Construction Fork

	544J <i>Standard Z-Bar</i>	<i>High-Lift Z-Bar</i> (see page 24)
A Reach, Fully Raised	2 ft. 6 in. (758 mm)	2 ft. 6 in. (760 mm)
B Fork Height, Fully Raised	11 ft. 9 in. (3574 mm)	12 ft. 11 in. (3926 mm)
C Maximum Reach, Fork Level	5 ft. 1 in. (1546 mm)	5 ft. 11 in. (1810 mm)
D Fork Height, Maximum Reach	5 ft. 7 in. (1705 mm)	5 ft. 7 in. (1705 mm)
E Reach, Ground Level	3 ft. 0 in. (912 mm)	4 ft. 1 in. (1249 mm)
F Depth Below Ground	1.2 in. (30 mm)	1.2 in. (30 mm)
G Tine Length	(see page 24)	(see page 25)
H Overall Length	(see page 24)	(see page 25)

544J LOADER WITH QUICK-COUPLER AND CONSTRUCTION FORK



**Standard Z-Bar Information
with Pin-On-Type Bucket**

544J

	<i>Narrow General Purpose w/Bolt-On Edge</i>	<i>Wide General Purpose w/Bolt-On Edge</i>	<i>General Purpose w/Bolt-On Edge</i>	<i>General Purpose w/Teeth and Segments</i>
Bucket Type/Size				
Capacity, Heaped SAE	3.0 cu. yd. (2.3 m ³)	3.0 cu. yd. (2.3 m ³)	2.5 cu. yd. (1.9 m ³)	2.5 cu. yd. (1.9 m ³)
Capacity, Struck SAE	2.6 cu. yd. (2.0 m ³)	2.6 cu. yd. (2.0 m ³)	2.1 cu. yd. (1.6 m ³)	2.1 cu. yd. (1.6 m ³)
Bucket Weight	2,400 lb. (1089 kg)	2,617 lb. (1187 kg)	2,061 lb. (935 kg)	2,173 lb. (986 kg)
Bucket Width	100.4 in. (2550 mm)	105.9 in. (2690 mm)	100.4 in. (2550 mm)	100.4 in. (2550 mm)
Breakout Force, SAE J732C	22,672 lb. (10 284 kg)	24,250 lb. (11 000 kg)	26,770 lb. (12 143 kg)	24,292 lb. (11 019 kg)
Tipping Load, Straight	22,801 lb. (10 016 kg)	21,993 lb. (9976 kg)	22,798 lb. (10 341 kg)	22,698 lb. (10 296 kg)
Tipping Load, 40-Degree Full Turn, SAE	18,752 lb. (8506 kg)	18,653 lb. (8461 kg)	19,422 lb. (8810 kg)	19,325 lb. (8766 kg)
Reach, 45-Degree Dump, 7-ft. (2.13 m)				
Clearance	58.5 in. (1486 mm)	57.2 in. (1453 mm)	56.22 in. (1428 mm)	58.0 in. (1475 mm)
Reach, 45-Degree Dump, Full Height	39.3 in. (997 mm)	37.0 in. (939 mm)	34.7 in. (882 mm)	37.8 in. (959 mm)
Dump Clearance, 45 Degree, Full Height	110 in. (2787 mm)	111 in. (2837 mm)	114 in. (2904 mm)	112 in. (2840 mm)
Overall Length, Bucket on Ground	24 ft. 3 in. (7385 mm)	23 ft. 11 in. (7281 mm)	23 ft. 7 in. (7184 mm)	23 ft. 10 in. (7283 mm)
Loader Clearance Circle, Bucket In Carry				
Position	37 ft. 10 in. (11 547 mm)	38 ft. 2 in. (11 630 mm)	37 ft. 7 in. (11 445 mm)	37 ft. 9 in. (11 502 mm)
Operating Weight	27,489 lb. (12 469 kg)	27,703 lb. (12 566 kg)	27,149 lb. (12 315 kg)	27,260 lb. (12 365 kg)

Loader operating information is based on machine with standard equipment; cab; rear cast bumper/counterweight; 20.5R25 tires; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

Adjustments to Operating Weights for Standard Z-Bar with Pin-On-Type Buckets or Quick-Coupler and Hook-On-Type Buckets

Adjustments to operating weights and tipping loads for 3.0-cu.-yd. (2.3 m³) general-purpose bucket with bolt-on cutting edge

Add (+) or deduct (-) lb. (kg) as indicated for	<i>Operating Weight</i>	<i>Tipping Load, Straight</i>	<i>Tipping Load, 40-Degree Full Turn, SAE</i>
loaders with three-piece rims and			
20.5R25 L-3 tires	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)
20.5R25 L-2 tires	- 228 lb. (- 104 kg)	- 154 lb. (- 70 kg)	- 133 lb. (- 60 kg)
20.5-25 L-2 tires	- 548 lb. (- 249 kg)	- 368 lb. (- 167 kg)	- 318 lb. (- 144 kg)
20.5-25 L-3 tires	- 416 lb. (- 189 kg)	- 279 lb. (- 127 kg)	- 162 lb. (- 74 kg)
600/65 R 25 L-3 tires**	+ 676 lb. (+ 307 kg)	+ 453 lb. (+ 206 kg)	+ 393 lb. (+ 178 kg)
23.1-26 Logger*	+ 44 lb. (+ 20 kg)	+ 30 lb. (+ 13.4 kg)	+ 26 lb. (+ 12 kg)
CaCl ₂ in 20.5-25 rear tires	+ 1,821 lb. (+ 826 kg)	+ 2,440 lb. (+ 1107 kg)	+ 2,112 lb. (+ 958 kg)
Optional rear cast bumper/counterweight (removed)	N/A	N/A	N/A

*Equipped with one-piece rims.

**CaCl₂ not recommended with 600/65R25 tires.

Standard Z-Bar Information with Quick-Coupler and Bucket

	<i>General Purpose (Wide) w/Bolt-On Edge</i>	<i>General Purpose w/Bolt-On Edge</i>
Bucket Type/Size		
Capacity, Heaped SAE	3.0 cu. yd. (2.3 m ³)	2.5 cu. yd. (1.9 m ³)
Capacity, Struck SAE	2.6 cu. yd. (2.0 m ³)	2.1 cu. yd. (1.6 m ³)
Bucket Weight with Coupler	3,206 lb. (1454 kg)	2,879 lb. (1306 kg)
Bucket Width	105.9 in. (2690 mm)	100.4 in. (2550 mm)
Breakout Force, SAE J732C	19,039 lb. (8636 kg)	18,937 lb. (8590 kg)
Tipping Load, Straight	18,163 lb. (8237 kg)	20,741 lb. (9408 kg)
Tipping Load, 40-Degree Full Turn, SAE	15,314 lb. (6945 kg)	17,548 lb. (7960 kg)
Reach, 45-Degree Dump, 7-ft. (2.13 m)		
Clearance	59.0 in. (1499 mm)	61.4 in. (1560 mm)
Reach, 45-Degree Dump, Full Height	40.3 in. (1099 mm)	43.7 in. (1109 mm)
Dump Clearance, 45 Degree, Full Height	103.6 in. (2632 mm)	107.0 in. (2718 mm)
Overall Length, Bucket on Ground	24 ft. 10 in. (7581 mm)	23 ft. 1 in. (7475 mm)
Loader Clearance Circle, Bucket In Carry		
Position	37 ft. 10 in. (11 575 mm)	38 ft. 3 in. (11 669 mm)
Operating Weight	28,299 lb. (12 834 kg)	27,967 lb. (12 686 kg)

Loader operating information is based on machine with standard equipment; cab; rear cast bumper/counterweight; 20.5R25 tires; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

Standard Z-Bar Information with

Quick-Coupler and Construction Fork 544J

Tine Length	48 in. (1220 mm)	60 in. (1525 mm)
Overall Length	25 ft. 7 in. (7802 mm)	26 ft. 7 in. (8106 mm)
Tipping Load, Straight (fork level, load centered forward 24 in. [610 mm] on 48-in. [1220 mm] tine and 30 in. [762 mm] on 60-in. [1525 mm] tine)	14,859 lb. (6740 kg)	14,002 lb. (6351 kg)
Tipping Load, 40-Degree Full Turn (fork level, load centered forward 24 in. [610 mm] on 48-in. [1220 mm] tine and 30 in. [762 mm] on 60-in. [1525 mm] tine)	12,632 lb. (5730 kg)	11,887 lb. (5392 kg)
Operating Weight	27,097 lb. (12 289 kg)	27,199 lb. (12 335 kg)

High-Lift Z-Bar Information with Pin-On-Type Bucket

Bucket Type/Size	Narrow General Purpose w/Bolt-On Edge	Wide General Purpose w/Bolt-On Edge	General Purpose w/Bolt-On Edge
Capacity, Heaped SAE	3.0 cu. yd. (2.3 m ³)	3.0 cu. yd. (2.3 m ³)	2.5 cu. yd. (1.9 m ³)
Capacity, Struck SAE	2.6 cu. yd. (2.0 m ³)	2.6 cu. yd. (2.0 m ³)	2.1 cu. yd. (1.6 m ³)
Bucket Weight	2,400 lb. (1089 kg)	2,396 lb. (1087 kg)	2,061 lb. (935 kg)
Bucket Width	100.4 in. (2550 mm)	105.9 in. (2690 mm)	100.4 in. (2550 mm)
Breakout Force, SAE J732C	20,939 lb. (9498 kg)	22,394 lb. (10 158 kg)	24,671 lb. (11 191 kg)
Tipping Load, Straight	18,816 lb. (8535 kg)	18,713 lb. (8488 kg)	19,380 lb. (8791 kg)
Tipping Load, 40-Degree Full Turn, SAE	15,928 lb. (7225 kg)	15,815 lb. (7174 kg)	16,455 lb. (7464 kg)
Reach, 45-Degree Dump, 7-ft. (2.13 m)			
Clearance	70.0 in. (1779 mm)	68.7 in. (1744 mm)	67.1 in. (1705 mm)
Reach, 45-Degree Dump, Full Height	39.3 in. (999 mm)	37.0 in. (941 mm)	34.5 in. (876 mm)
Dump Clearance, 45 Degree, Full Height	123.6 in. (3139 mm)	125.6 in. (3189 mm)	128.0 in. (3249 mm)
Overall Length, Bucket on Ground	25 ft. 3 in. (7689 mm)	24 ft. 11 in. (7612 mm)	24 ft. 8 in. (7516 mm)
Loader Clearance Circle, Bucket In Carry			
Position	38 ft. 11 in. (11 865 mm)	39 ft. 2 in. (11 942 mm)	38 ft. 7 in. (11 751 mm)
Operating Weight	27,641 lb. (12 538 kg)	27,855 lb. (12 635 kg)	27,302 lb. (12 384 kg)

Loader operating information is based on machine with standard equipment; cab; rear cast bumper/counterweight; 20.5R25 tires; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

Adjustments to Operating Weights for High-Lift Z-Bar with Pin-On-Type Buckets or Quick-Coupler and Hook-On-Type Buckets

Adjustments to operating weights and tipping loads for 3.0-cu.-yd. (2.3 m³) general-purpose bucket with bolt-on cutting edge

Add (+) or deduct (-) lb. (kg) as indicated for

loaders with three-piece rims and	Operating Weight	Tipping Load, Straight	Tipping Load, 40-Degree Full Turn, SAE
20.5R25 L-3 tires	0 lb. (0 kg)	0 lb. (0 kg)	0 lb. (0 kg)
20.5R25 L-2 tires	- 228 lb. (- 104 kg)	- 139 lb. (- 63 kg)	- 120 lb. (- 55 kg)
20.5-25 L-2 tires	- 548 lb. (- 249 kg)	- 332 lb. (- 150 kg)	- 287 lb. (- 130 kg)
20.5-25 L-3 tires	- 416 lb. (- 189 kg)	- 233 lb. (- 106 kg)	- 219 lb. (- 99 kg)
600/65R25 L-3 tires**	+ 676 lb. (+ 307 kg)	+ 409 lb. (+ 186 kg)	+ 355 lb. (+ 161 kg)
23.1-26 Logger*	+ 44 lb. (+ 20 kg)	+ 27 lb. (+ 12 kg)	+ 23 lb. (+ 11 kg)
CaCl ₂ in 20.5-25 rear tires	+ 1,821 lb. (+ 826 kg)	+ 2,203 lb. (+ 999 kg)	+ 1,911 lb. (+ 867 kg)
Optional rear cast bumper/counterweight (removed)	N/A	N/A	N/A

*Equipped with one-piece rims.

**CaCl₂ not recommended with 600/65R25 tires.

High-Lift Z-Bar Information with Quick-Coupler and Bucket

544J

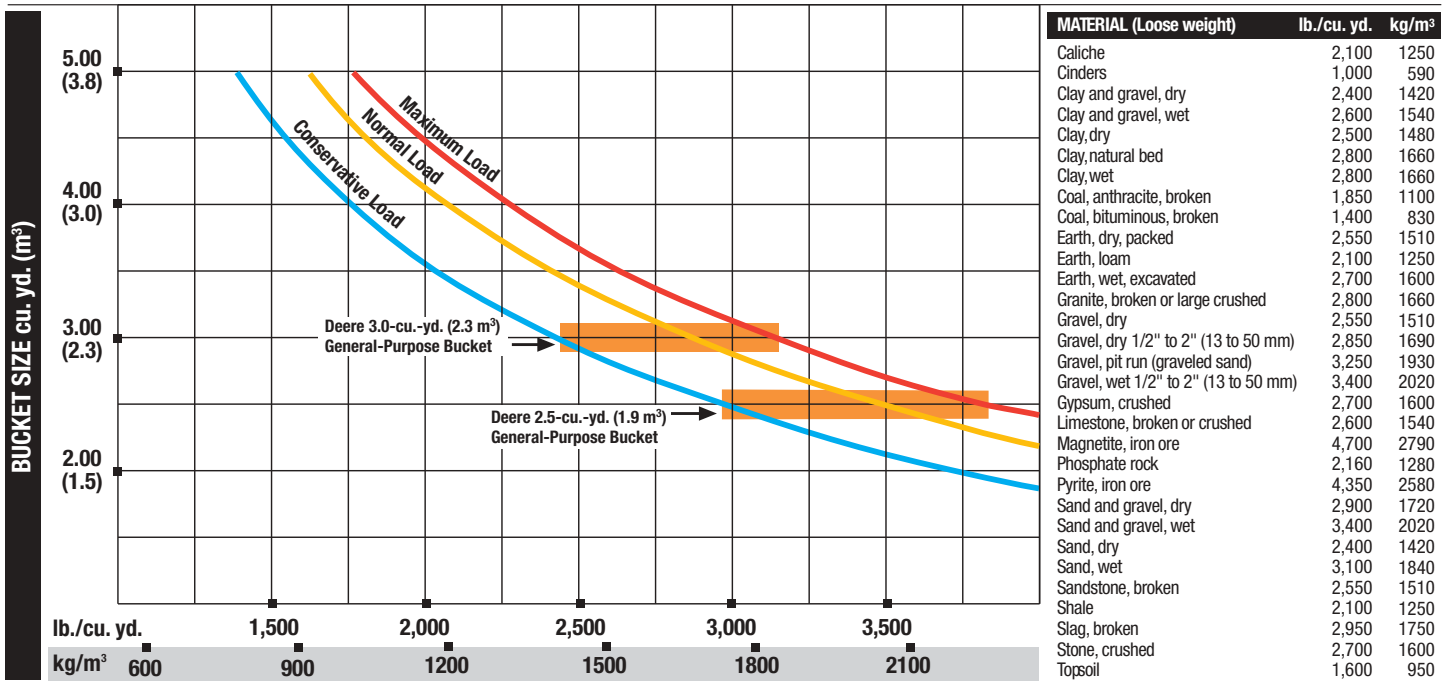
Bucket Type/Size	General Purpose w/Bolt-On Edge	General Purpose w/Bolt-On Edge
Capacity, Heaped SAE	3.0 cu. yd. (2.3 m ³)	2.5 cu. yd. (1.9 m ³)
Capacity, Struck SAE	2.6 cu. yd. (2.0 m ³)	2.1 cu. yd. (1.6 m ³)
Bucket Weight with Coupler	3,595 lb. (1631 kg)	2,879 lb. (1306 kg)
Bucket Width	105.9 in. (2690 mm)	100.4 in. (2550 mm)
Breakout Force, SAE J732C	17,557 lb. (7964 kg)	18,104 lb. (8212 kg)
Tipping Load, Straight	16,964 lb. (7695 kg)	17,687 lb. (8023 kg)
Tipping Load, 40-Degree Full Turn, SAE	14,202 lb. (6442 kg)	14,905 lb. (6761 kg)
Reach, 45-Degree Dump, 7-ft. (2.13 m)		
Clearance	70.5 in. (1790 mm)	72.7 in. (1846 mm)
Reach, 45-Degree Dump, Full Height	43.0 in. (1092 mm)	43.4 in. (1102 mm)
Dump Clearance, 45 Degree, Full Height	117.2 in. (2977 mm)	120.6 in. (3063 mm)
Overall Length, Bucket on Ground	25 ft. 11 in. (7905 mm)	25 ft. 7 in. (7807 mm)
Loader Clearance Circle, Bucket In Carry Position	39 ft. 10 in. (12 151 mm)	39 ft. 4 in. (12 002 mm)
Operating Weight	28,836 lb. (13 080 kg)	28,122 lb. (12 756 kg)

Loader operating information is based on machine with standard equipment; cab; rear cast bumper/counterweight; 20.5R25 tires; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

High-Lift Z-Bar Information with Quick-Coupler and Construction Fork

Tine Length	48 in. (1220 mm)	60 in. (1525 mm)
Overall Length	26 ft. 8 in. (8139 mm)	27 ft. 8 in. (8442 mm)
Tipping Load, Straight (fork level, load centered forward 24 in. [610 mm] on 48-in. [1220 mm] tine and 30 in. [762 mm] on 60-in. [1525 mm] tine)	13,379 lb. (6069 kg)	12,651 lb. (5739 kg)
Tipping Load, 40-Degree Full Turn (fork level, load centered forward 24 in. [610 mm] on 48-in. [1220 mm] tine and 30 in. [762 mm] on 60-in. [1525 mm] tine)	11,345 lb. (5146 kg)	10,711 lb. (4858 kg)
Operating Weight	27,249 lb. (12 358 kg)	27,351 lb. (12 404 kg)

Standard Z-Bar Pin-On Bucket Selection Guide*



* 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.