JOHN DEERE

JD | CONSTRUCTION EQUIPMENT DIVISION | LOADERS

MODEL NO.

304H 324H 344H

STEREO STEERING

One good TURN deserves

Our unique stereo steering combines articulation and rear-axle steering to reduce the turning radius by as much as 20 percent compared to conventional articulation-steering systems.

JD		
304H	324H	344H
65 hp 1.2-1.4 cu. yd.	80 hp 1.4-1.75 cu. yd.	98 hp 1.7-2.0 cu. yd.

Stereo steering allows extremely tight turns with excellent tipping loads. That's because the machine actually articulates less, keeping the center of gravity and ballast in line to better counter load forces.

another, and another

INTRODUCING THE TIGHT-TURNING 300 SERIES LOADERS FROM DEERE. In the past, loader maneuverability came at the expense of lift capacity. But the powerful, yet nimble Deere 344H changed all that. Now we're giving you more of a good thing with the introduction of the 324H and 304H. Welcome to a new era of under-100-horsepower four-wheel-drive productivity. These loaders combine agility and stability for performance that's unmatched in this class.

This family of loaders has one feature in particular that's turning a lot of heads: stereo steering. This unique combination of machine articulation and rear-axle steering gives you the tightest turn radius in the class. Yet this design actually reduces the angle of articulation to allow safer transport of higher payloads. Talk about a turn for the better.

Picks up where skid steers leave off.

With skid steers getting so much attention these days, it's easy to overlook smaller four-wheel-drive loaders like the 65-hp Deere 304H. But for anyone needing a more-powerful, more-stable, compact material mover, this small-but-serious 1.2-yard hydrostatic loader offers substantial tipping-load capacity (9,418 pounds) in a highly maneuverable package.

Without question the skid steer is a great machine in many applications. But the 300 Series Loaders' advantages over skid steers can include fuel savings, long-term tire savings, better visibility, smoother ride on rough ground, and superior operator comfort – plus longer reach, higher dump height, and faster travel speed. All of which leads to improved productivity.

Talk about versatility. The compact workhorse we call the 304H comes standard with an integral quick-coupler, capable of handling an arsenal of tools, from forks and jib booms to grapple buckets and brooms.

MODEL NO.

304H

With conventional-steering loaders, you might figure as much as half of any storage space must be left open for the loader to operate, leaving just half for actual storage. But with a tight-turning 300 Series Loader, you might need just one-third of the area to maneuver, increasing valuable storage capacity to two-thirds.

The hydrostatic drive provides infinitely variable speed, controlled with one pedal, while maintaining full engine rpm and hydraulic flow. Effective dynamic-braking capabilities maximize operator control.

The steering column is fully adjustable. Controls are easy to understand and even easier to reach. Hydraulic pilot controls require less lever effort.

Born to run.

Sure the 80-hp 324H is packed with the same great features as the rest of the 300 Series family – features like stereo steering and hydrostatic drive. But everyone knows a loader is only as good as its operator. That's why we work so hard to surround you with comfort and convenience. Take, for instance, our hydraulic pilot controls, requiring less effort than mechanical linkages. Generous glass areas provide exceptional visibility, enhanced to the rear by the rounded engine cover. And attractive, modern styling is featured throughout.

Even fully articulated, a 300 Series Loader leaves plenty of room for the operator to access the cab. With conventional articulation, this would be impossible. Handholds and steps are ergonomically located and slip resistant.

The rounded engine cover helps provide excellent visibility to the rear.

The combination of oscillating axle and elastic articulation at the pivot absorbs pitching motions and reduces cab tilt by as much as 50 percent. This increases travel stability and operator comfort.

Works day in and day out

The 98-hp 344H started it all, earning a solid reputation as a reliable workhorse. This veteran machine has proven itself in all kinds of applications, from dirt and utility work to jobs at nurseries, recycling centers, and dairies.

Of course, you can't get the inside scoop on the dependability of the 300 Series Loader without looking under the hood. Simply tilt the entire engine cover to reveal a muscular, emissions-certified John Deere PowerTech™ engine (a Yanmar engine on the 304H). Other smart features include the two-speed hydraulic fan drive that runs at low speed in low temperatures to draw less power, kicking into high when temperatures warrant. This hydraulic fan design also provides more room for cleanout and airflow.

Overall, you'll find the 300 Series Loaders to be exceptionally rugged, yet simply designed. And that means fewer breakdowns and faster repairs than you might expect from a loader packed with so many innovations.

This easy-tilt engine hood and handy rear access door make daily maintenance from ground level a cinch. Notice how the transverse-mounted engine puts the fuel filter and dipstick close at hand.

t without a break.

JD	CONSTRUCTION EQUIPMENT DIVISION	LOADERS
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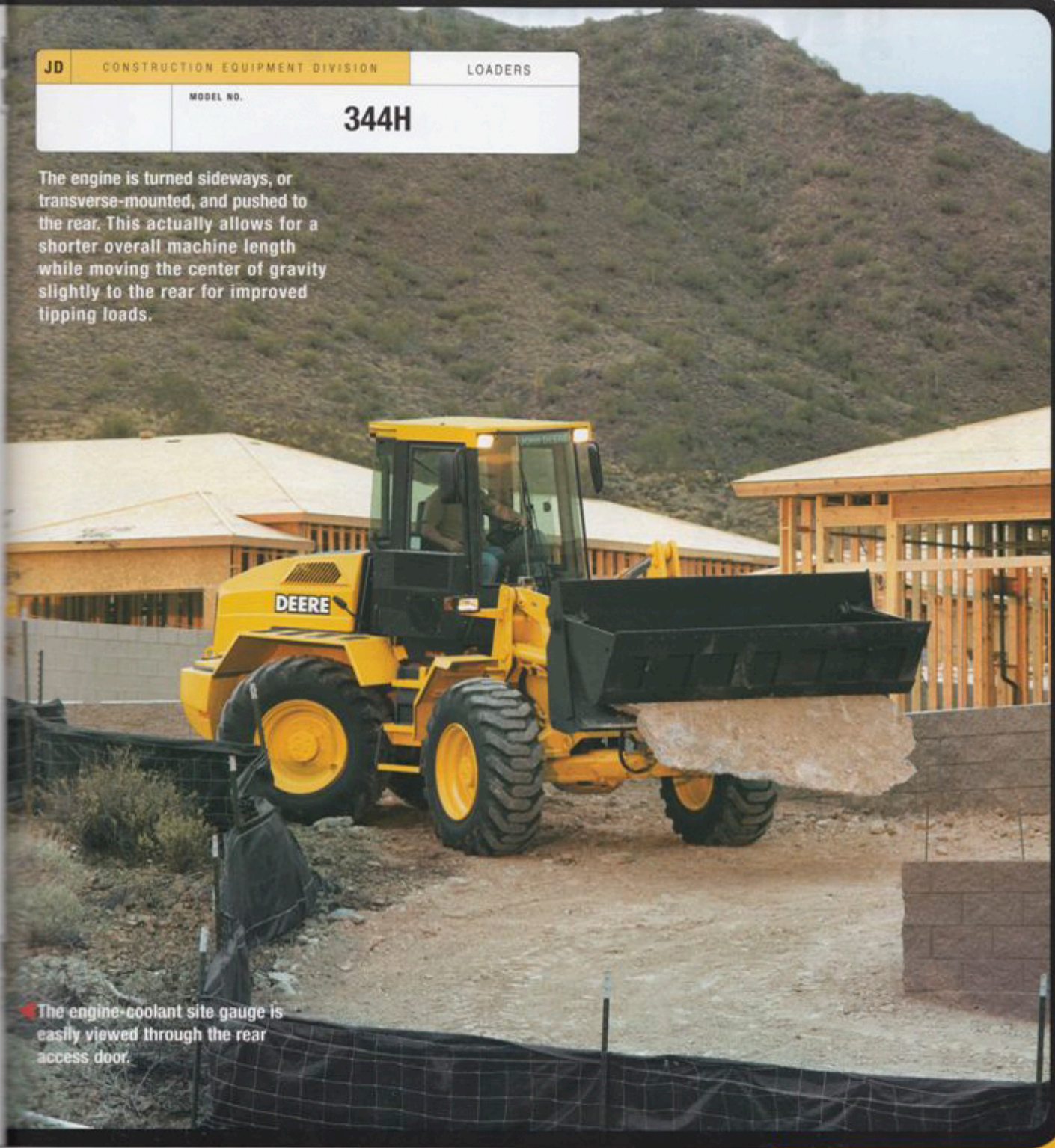
The engine is turned sideways, or transverse-mounted, and pushed to the rear. This actually allows for a shorter overall machine length while moving the center of gravity slightly to the rear for improved tipping loads.



The engine-coolant site gauge is easily viewed through the rear access door.

If you can't KEEP IT BUSY.

A loader has to be working to make you money. And it's easy to stay busy in a 300 Series Loader. That's because there's virtually no end to the attachments it will handle when equipped with a hydraulically actuated quick-coupler. The quick-coupler lets you couple and release attachments in minutes, usually without tools and without leaving the cab. A coupler is standard and integral on the 304H, optional on the 324H and 344H.

Need to use a set of forks? A jib boom? Or a general-purpose bucket? No problem. The 300 Series can handle it. How about a broom? A snow blower? Or a side-dump bucket? Go right ahead. If it's a tool you need, chances are you can put it to work on a 300 Series Loader. Simply talk it over with your John Deere dealer. It's easy to get hooked on convenience and versatility like this.

MODEL NO.

ATTACHMENTS

you're just not trying.

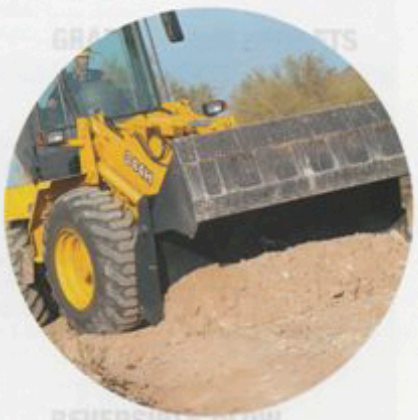
Extendable jib boom

General-purpose bucket

Side-dump bucket

Hydraulic forks

Grapple bucket



Multipurpose (4-in-1) bucket

LOADER RAKE

AUTO FORK

304H 324H 344H

Engine	304H	324H	344H
Type	Yanmar 4TNE98 naturally aspirated direct-injection diesel; meets EPA Tier II non-road emissions regulations	John Deere PowerTech® 4045DF; meets EPA Tier II non-road emissions regulations	John Deere PowerTech 4045T with turbocharger; meets EPA Tier II non-road emissions regulations
Rated power @ 2,400 rpm	65 SAE net hp (48 kW), 69 SAE gross hp (51 kW)	80 SAE net hp (59 kW), 84 SAE gross hp (62 kW)	98 SAE net hp (71 kW), 99 SAE gross hp (74 kW)
Cylinders	4	4	4
Displacement	202 cu. in. (3.3 L)	276 cu. in. (4.5 L)	276 cu. in. (4.5 L)
Maximum net torque	173 lb.-ft. (235 Nm) @ 1,400 rpm	223 lb.-ft. (302 Nm) @ 1,200 rpm	291 lb.-ft. (395 Nm) @ 1,400 rpm
Lubrication	pressure system with full-flow spin-on filter	pressure system with full-flow spin-on filter and cooler	pressure system with full-flow spin-on filter and cooler
Fuel consumption, typical	1.0 to 2.0 gal./hr. (3.8 to 7.6 L/h)	1.4 to 2.7 gal./hr. (5.3 to 10.2 L/h)	1.6 to 3.2 gal./hr. (6.0 to 12.1 L/h)
Cooling fan	blower type, hydraulically driven	blower type, hydraulically driven	blower type, hydraulically driven
Electrical system	12 volt with 60-amp alternator	12 volt with 65-amp alternator	12 volt with 65-amp alternator
Batteries (two 12 volt)	reserve capacity: 176 min. standard, 850 CCA; (2 batteries x 850 CCA = 1,700 CCA – optional)	reserve capacity: 176 min. standard, 850 CCA; (2 batteries x 850 CCA = 1,700 CCA – optional)	reserve capacity: 176 min. standard, 850 CCA; (2 batteries x 850 CCA = 1,700 CCA – optional)
Air cleaner	dual safety element dry type	dual safety element dry type	dual safety element dry type
Transmission			
Type	hydrostatic (HST) with infinitely variable speed control over full range of operating speeds; two speed ranges	hydrostatic (HST) with infinitely variable speed control over full range of operating speeds; two speed ranges	hydrostatic (HST) with infinitely variable speed control over full range of operating speeds; two speed ranges
Controls	low-effort electric shift; single twist-grip-type control lever for direction and range changes; HST inching pedal, which allows infinitely reduced travel speeds while maintaining full engine rpm and hydraulic flow	low-effort electric shift; single twist-grip-type control lever for direction and range changes; HST inching pedal, which allows infinitely reduced travel speeds while maintaining full engine rpm and hydraulic flow	low-effort electric shift; single twist-grip-type control lever for direction and range changes; HST inching pedal, which allows infinitely reduced travel speeds while maintaining full engine rpm and hydraulic flow
Travel speeds (two forward and two reverse)	*Forward and Reverse*	*Forward and Reverse*	*Forward and Reverse*
Speed range 1	5.6 mph (9.0 km/h)	5.3 mph (8.5 km/h)	5.2 mph (8.3 km/h)
Speed range 2	18.6 mph (30.0 km/h)	17.4 mph (28.0 km/h)	18.0 mph (28.8 km/h)
Axles/Brakes			
Final drive	heavy-duty planetary, mounted outboard	heavy-duty planetary, mounted outboard	heavy-duty planetary, mounted outboard
Differentials	conventional front and rear	limited slip front (providing self-locking torque transfer up to 45%) and conventional rear differential	limited slip front (providing self-locking torque transfer up to 45%) and conventional rear differential
Rear axle oscillation versus front	24 degrees total, stop to stop (composed of 12 degrees axle oscillation plus 12 degrees frame oscillation)	24 degrees total, stop to stop (composed of 12 degrees axle oscillation plus 12 degrees frame oscillation)	24 degrees total, stop to stop (composed of 12 degrees axle oscillation plus 12 degrees frame oscillation)
Maximum rise and fall, single wheel	12.8 in. (326 mm)	13.4 in. (340 mm)	15.3 in. (390 mm)
Brakes (conform to SAE J1473, ISO3450)			
Service brakes	dual disks, hydraulically actuated and adjustment free	dual disks, hydraulically actuated and adjustment free	dual disks, hydraulically actuated and adjustment free
Parking brake	automatically spring applied, hydraulically released disk, located at the front axle input shaft	automatically spring applied, hydraulically released disk, located at the front axle input shaft	automatically spring applied, hydraulically released disk, located at the front axle input shaft
Hydraulic System/Steering			
Pump (loader and steering)	constant-displacement gear pump; open-center system	constant-displacement gear pump; open-center system	constant-displacement gear pump; open-center system
Maximum flow @ 1,000 psi (6895 kPa)	22 gpm (82.5 L/min.) @ 2,500 rpm	30 gpm (115 L/min.) @ 2,400 rpm	30 gpm (115 L/m) @ 2,400 rpm
Pressure	loader relief 3,046 psi (21 000 kPa, or 210 bar); steering relief 2,645 psi (18 240 kPa, or 180 bar)	loader and steering relief 3,045 psi (21 000 kPa, or 210 bar)	loader and steering relief 3,335 psi (22 990 kPa, or 230 bar)
Loader controls	pilot-operated, three-function valve with single-lever control for boom and bucket, and auxiliary lever for standard pin disconnect and auxiliary hydraulics, with control-lever lockout feature; optional four-function valve	pilot-operated, two-function valve with single-lever control and control-lever lockout feature; optional third- and fourth-function valves	pilot-operated, two-function valve with single-lever control and control-lever lockout feature; optional third- and fourth-function valves
Hydraulic cycle times	9.8 total sec.	9.7 total sec.	9.9 total sec. (with the original pump)
Raise	4.5 sec.	4.3 sec.	4.4 sec.
Dump	1.5 sec.	1.4 sec.	1.5 sec.
Lower	3.8 sec. (float down) / 3.0 sec. (power down)	4.0 sec. (float down) / 3.3 sec. (power down)	4.0 sec. (float down) / 3.0 sec. (power down)
Maximum lift capacity	*with 1.1-cu. yd. (0.9 m³) excavating bucket and teeth*	*with 1.4-cu. yd. (1.1 m³) excavating bucket and teeth*	*with 1.75-cu. yd. (1.3 m³) excavating bucket and teeth*
Lift at ground level	12,136 lb. (5505 kg)	14,159 lb. (6422 kg)	15,075 lb. (6840 kg)
Lift at maximum height	6,966 lb. (3160 kg)	9,438 lb. (4281 kg)	9,450 lb. (4290 kg)
Steering (conforms to SAE J1511)			
Type	power, fully hydraulic articulation; meets ISO5010 and SAE J/ISO5010 secondary steering requirements	power, fully hydraulic articulation	power, fully hydraulic articulation
Relief valve setting	3,600 psi (24 850 kPa)	3,600 psi (24 850 kPa)	3,600 psi (24 850 kPa)
Articulation angle/rear wheel steering angle	56-degree articulation angle (28 degrees each direction), plus 29 degrees rear wheel steering tied mechanically to articulation; equivalent of a conventional steering system having 96 degrees of articulation	56-degree articulation angle (28 degrees each direction), plus 26 degrees rear wheel steering tied mechanically to articulation; equivalent of a conventional steering system having 97 degrees of articulation	56-degree articulation angle (28 degrees each direction), plus 27 degrees rear wheel steering tied mechanically to articulation; equivalent of a conventional steering system having 97 degrees of articulation
Turning radius (measured to centerline of outside tire)	10 ft. 8 in. (3.26 m)	12 ft. 5 in. (3.79 m)	12 ft. 10 in. (3.9 m)

304H Tires

	Tread Width	Width Over Tires	Change In Vertical Height
405/70R20	62.2 in. (1580 mm)	78.0 in. (1980 mm)	0 in. (0 mm)

324H Tires

	Tread Width	Width Over Tires	Change In Vertical Height
15.5-25, 12 PR L2	66.9 in. (1700 mm)	83.1 in. (2110 mm)	0 in. (0 mm)

344H Tires

Choice of	Tread Width	Width Over Tires	Change In Vertical Height
15.5-25, 12 PR L2	74.4 in. (1890 mm)	90.6 in. (2300 mm)	– 1.5 in. (– 37 mm)
17.5-25, 12 PR L2	73.6 in. (1870 mm)	92.1 in. (2340 mm)	0 in. (0 mm)
17.5-25, XTLA (L2 type) Michelin Radial	73.6 in. (1870 mm)	92.1 in. (2340 mm)	– 0.3 in. (– 8 mm)

Capacities	304H	324H	344H
Fuel tank (with ground level fueling)	18.5 gal. (70.0 L)	37.0 gal. (140.0 L)	37.0 gal. (140.0 L)
Cooling system	12.9 qt. (12.2 L)	15.9 qt. (15.0 L)	18.0 qt. (17.0 L)
Engine lubrication, including full-flow spin-on filter	9.9 qt. (9.4 L)	13.0 qt. (12.0 L)	13.0 qt. (12.0 L)
Loader hydraulic and hydrostatic reservoir with filter	11.9 gal. (45.0 L)	17.2 gal. (65.0 L)	17.2 gal. (65.0 L)
Front axle (differential and planetary)	6.0 qt. (5.7 L)	10.0 qt. (9.5 L)	11.0 qt. (10.4 L)
Rear axle (differential and HST motor gearbox)	5.0 qt. (4.7 L)	7.4 qt. (7.0 L)	11.0 qt. (10.4 L)
Front/rear axle planetary hubs (each)	24.0 oz. (0.7 L)	24.0 oz. (0.7 L)	27.0 oz. (0.8 L)

Dimensions with Bucket

		304H	324H	344H
A	Height to top of cab and canopy	9 ft. (2750 mm)	9 ft. 11 in. (3025 mm)	10 ft. (3062 mm)
B	Height to top of exhaust	8 ft. 6 in. (2600 mm)	9 ft. 3 in. (2800 mm)	9 ft. 3 in. (2823 mm)
C	Ground clearance	12.8 in. (325 mm)	14.0 in. (355 mm)	14.9 in. (378 mm)
D	Length from centerline of front axle	37.4 in. (950 mm)	41.3 in. (1050 mm)	45.3 in. (1150 mm)
E	Wheelbase	84.6 in. (2150 mm)	98.4 in. (2500 mm)	102.4 in. (2600 mm)
F	Dump height	▲	▲	▲
G	Height to hinge pin, fully raised	10 ft. 5 in. (3174 mm)	11 ft. (3343 mm)	12 ft. (3645 mm)
H	Dump reach	▲▲	▲▲	▲▲
I	Maximum digging depth	2.0 in. (50 mm)	3.0 in. (75 mm)	2.5 in. (63 mm)
J	Overall length	▲▲▲	▲▲▲	▲▲▲
K	Maximum rollback at full height	52 degrees	62 degrees	63 degrees
L	Bucket dump at full height	42 degrees	45 degrees	45 degrees

▲ See Bucket Information page 14.
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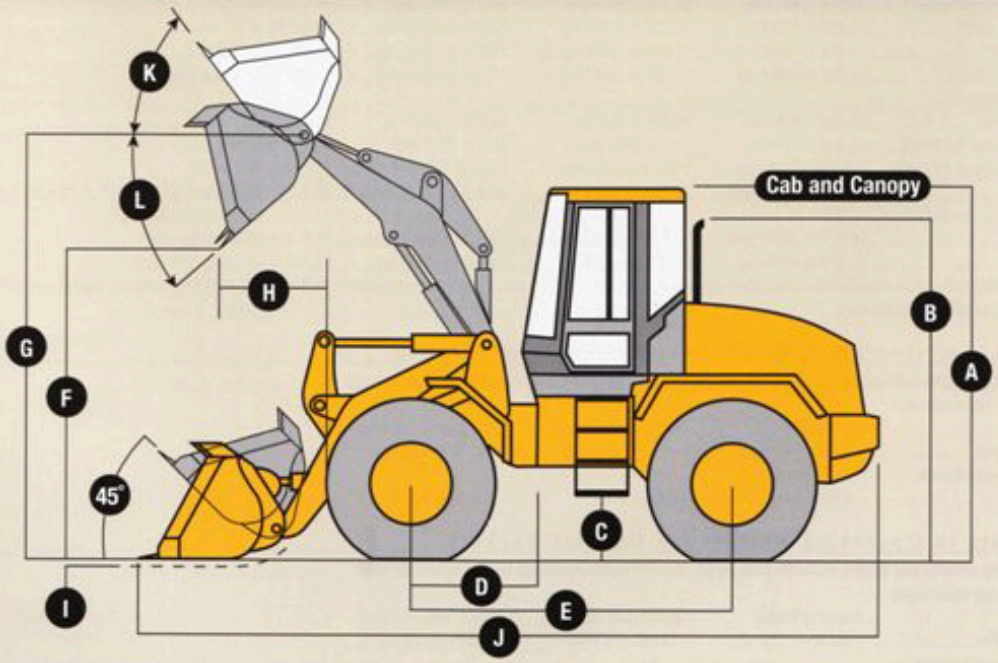


304H Bucket Information (Euro Quick-Coupler)

Bucket Type/Size	*Stockpiling and General Purpose w/Bolt-on Edge*	*Stockpiling and General Purpose w/Teeth*	*Excavating w/Bolt-on Edge*	*Excavating w/Teeth*
Capacity, heaped SAE	1.4 cu. yd. (1.1 m³)	1.4 cu. yd. (1.1 m³)	1.2 cu. yd. (0.9 m³)	1.2 cu. yd. (0.9 m³)
Capacity, struck SAE	1.2 cu. yd. (0.9 m³)	1.2 cu. yd. (0.9 m³)	1.0 cu. yd. (0.8 m³)	1.0 cu. yd. (0.8 m³)
Bucket width	82.7 in. (2100 mm)	82.7 in. (2100 mm)	82.7 in. (2100 mm)	82.7 in. (2100 mm)
Breakout force, SAE J732C	10,119 lb. (4590 kg)	9,438 lb. (4281 kg)	10,583 lb. (4800 kg)	11,023 lb. (5000 kg)
Tipping load, straight	9,244 lb. (4193 kg)	9,330 lb. (4232 kg)	9,327 lb. (4231 kg)	9,418 lb. (4272 kg)
Tipping load, full turn, SAE	8,640 lb. (3919 kg)	8,721 lb. (3956 kg)	8,717 lb. (3954 kg)	8,803 lb. (3993 kg)
▲▲ Reach, 42-degree dump, 7-ft. (2.13 m) clearance	43.9 in. (1115 mm)	44.7 in. (1135 mm)	43.5 in. (1105 mm)	44.2 in. (1123 mm)
▲▲ Reach, 42-degree dump, full height	35.9 in. (913 mm)	35.5 in. (901 mm)	34.0 in. (864 mm)	33.6 in. (853 mm)
▲ Dump clearance, 42 degree, full height	95.3 in. (2420 mm)	96.7 in. (2457 mm)	97.0 in. (2463 mm)	98.4 in. (2500 mm)
▲▲▲ Overall length	17 ft. 2 in. (5240 mm)	17 ft. 4 in. (5285 mm)	17 ft. (5175 mm)	17 ft. 2 in. (5220 mm)
Loader clearance circle, bucket in carry position	25 ft. (7620 mm)	25 ft. 2 in. (7670 mm)	24 ft. 11 in. (7590 mm)	25 ft. (7610 mm)
Operating weight	12,044 lb. (5463 kg)	11,956 lb. (5423 kg)	12,015 lb. (5450 kg)	11,922 lb. (5408 kg)

Loader operating information is based on machine with all standard equipment, 405/70R20 (no fluid) tires, ROPS cab, 175-lb. (79 kg) operator, and full fuel tank. This information is affected by tire size, ballast, and different attachments.

324H Bucket Information (Pin-on Type)

Bucket Type/Size	*Stockpiling and General Purpose w/Bolt-on Edge*	*Stockpiling and General Purpose w/Teeth*	*Excavating w/Bolt-on Edge*	*Excavating w/Teeth*
Capacity, heaped SAE	1.75 cu. yd. (1.3 m³)	1.70 cu. yd. (1.3 m³)	1.40 cu. yd. (1.1 m³)	1.40 cu. yd. (1.1 m³)
Capacity, struck SAE	1.45 cu. yd. (1.1 m³)	1.40 cu. yd. (1.1 m³)	1.20 cu. yd. (0.9 m³)	1.20 cu. yd. (0.9 m³)
Bucket width	94.5 in. (2400 mm)	94.5 in. (2400 mm)	86.6 in. (2200 mm)	86.6 in. (2200 mm)
Breakout force, SAE J732C	16,629 lb. (7543 kg)	17,754 lb. (8053 kg)	17,754 lb. (8053 kg)	19,103 lb. (8665 kg)
Tipping load, straight	10,479 lb. (4753 kg)	10,595 lb. (4806 kg)	10,750 lb. (4876 kg)	10,825 lb. (4919 kg)
Tipping load, full turn, SAE	9,766 lb. (4430 kg)	9,877 lb. (4480 kg)	10,020 lb. (4545 kg)	10,110 lb. (4586 kg)
▲▲ Reach, 45-degree dump, 7-ft. (2.13 m) clearance	52.1 in. (1324 mm)	52.5 in. (1333 mm)	51.6 in. (1310 mm)	51.9 in. (1318 mm)
▲▲ Reach, 45-degree dump, full height	33.1 in. (842 mm)	32.5 in. (825 mm)	31.8 in. (807 mm)	31.1 in. (789 mm)
▲ Dump clearance, 45 degree, full height	106.2 in. (2700 mm)	108.1 in. (2746 mm)	107.7 in. (2736 mm)	109.5 in. (2782 mm)
▲▲▲ Overall length	19 ft. 7 in. (5965 mm)	19 ft. 10 in. (6040 mm)	19 ft. 5 in. (5915 mm)	19 ft. 8 in. (5990 mm)
Loader clearance circle, bucket in carry position	29 ft. 1 in. (8872 mm)	29 ft. 3 in. (8920 mm)	28 ft. 6 in. (8664 mm)	28 ft. 7 in. (8712 mm)
Operating weight	15,642 lb. (7095 kg)	15,520 lb. (7040 kg)	15,410 lb. (6990 kg)	15,311 lb. (6945 kg)

Loader operating information is based on machine with all standard equipment; 15.5-25, 12 PR L2 tires; standard counterweight; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

344H Bucket Information (Pin-on Type)

Bucket Type/Size	*Stockpiling and General Purpose w/Bolt-on Edge*	*Stockpiling and General Purpose w/Teeth*	*Excavating w/Bolt-on Edge*	*Excavating w/Teeth*
Capacity, heaped SAE	2.0 cu. yd. (1.5 m³)	2.0 cu. yd. (1.5 m³)	1.7 cu. yd. (1.3 m³)	1.7 cu. yd. (1.3 m³)
Capacity, struck SAE	1.6 cu. yd. (1.2 m³)	1.6 cu. yd. (1.2 m³)	1.4 cu. yd. (1.1 m³)	1.4 cu. yd. (1.1 m³)
Bucket width	94.5 in. (2400 mm)	94.5 in. (2400 mm)	94.5 in. (2400 mm)	94.5 in. (2400 mm)
Breakout force, SAE J732C	16,629 lb. (7543 kg)	17,529 lb. (7951 kg)	18,204 lb. (8257 kg)	19,328 lb. (8767 kg)
Tipping load, straight	11,923 lb. (5408 kg)	12,039 lb. (5461 kg)	12,073 lb. (5476 kg)	12,209 lb. (5538 kg)
Tipping load, full turn, SAE	11,010 lb. (4994 kg)	11,127 lb. (5047 kg)	11,153 lb. (5059 kg)	11,290 lb. (5121 kg)
▲▲ Reach, 45-degree dump, 7-ft. (2.13 m) clearance	55.3 in. (1406 mm)	59.6 in. (1514 mm)	54.4 in. (1381 mm)	58.5 in. (1487 mm)
▲▲ Reach, 45-degree dump, full height	32.0 in. (814 mm)	35.3 in. (896 mm)	35.3 in. (896 mm)	33.1 in. (840 mm)
▲ Dump clearance, 45 degree, full height	110.8 in. (2814 mm)	108.7 in. (2761 mm)	113.0 in. (2870 mm)	110.9 in. (2817 mm)
▲▲▲ Overall length	20 ft. 5 in. (6217 mm)	20 ft. 8 in. (6294 mm)	20 ft. 2 in. (6137 mm)	20 ft. 5 in. (6214 mm)
Loader clearance circle, bucket in carry position	29 ft. 7 in. (9010 mm)	29 ft. 8 in. (9050 mm)	29 ft. 5 in. (8956 mm)	29 ft. 6 in. (9000 mm)
Operating weight	16,976 lb. (7700 kg)	16,876 lb. (7655 kg)	16,909 lb. (7670 kg)	16,788 lb. (7615 kg)

Loader operating information is based on machine with all standard equipment; 17.5-25, 12 PR L2 tires; standard counterweight; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

344H Adjustments to Operating Weights for Pin-on Type Buckets

Adjustments to operating weights and tipping loads for 2.00-cu. yd. (1.5 m³) material-handling bucket w/bolt-on edge

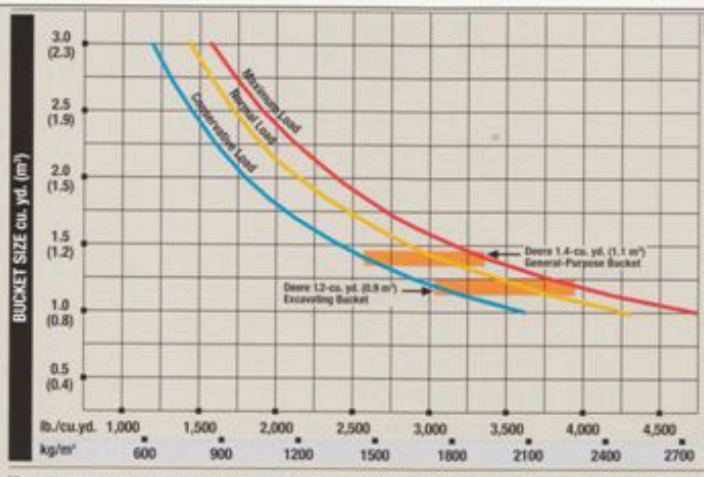
Add (+) or deduct (–) lb. (kg) as indicated for loaders with	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, Full Turn*
15.5-25, 12 PR L2 tires	– 485 lb. (– 220 kg)	– 311 lb. (– 141 kg)	– 291 lb. (– 132 kg)
17.5-25, XTLA (L2 type) Michelin Radial tires	– 9 lb. (– 4 kg)	– 7 lb. (– 3 kg)	– 7 lb. (– 3 kg)

344H Adjustments to Operating Weights for Coupler Buckets

Adjustments to operating weights and tipping loads for 2.00-cu. yd. (1.5 m³) general-purpose bucket w/bolt-on edge

Add (+) or deduct (–) lb. (kg) as indicated for loaders with	*Operating Weight*	*Tipping Load, Straight*	*Tipping Load, Full Turn*
15.5-25, 12 PR L2 tires	– 485 lb. (– 220 kg)	– 295 lb. (– 134 kg)	– 278 lb. (– 126 kg)
17.5-25, XTLA (L2 type) Michelin Radial tires	– 9 lb. (– 4 kg)	– 4 lb. (– 2 kg)	– 4 lb. (– 2 kg)

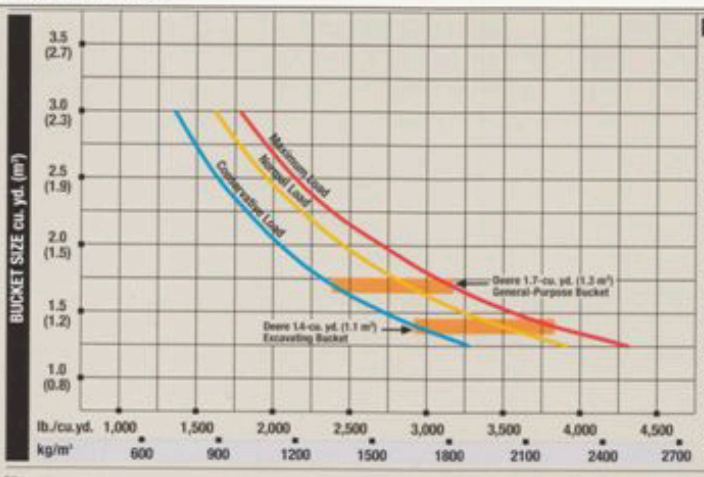
304H Bucket Selection Guide*



MATERIAL (Loose weight)	lb./cu. yd.	kg/m³
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.

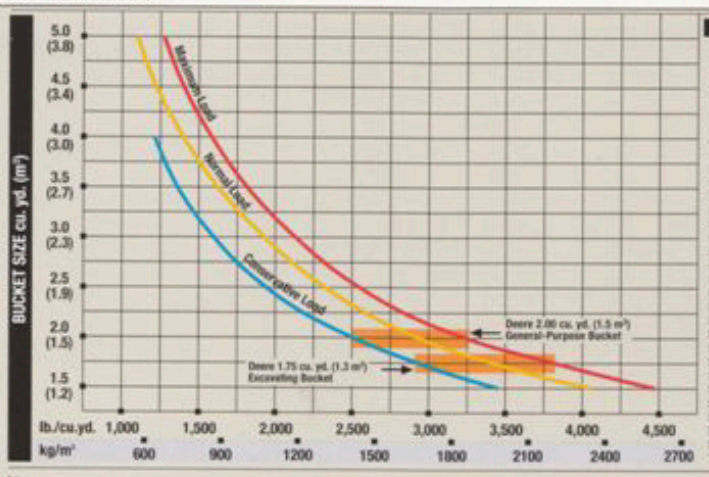
324H Bucket Selection Guide*



MATERIAL (Loose weight)	lb./cu. yd.	kg/m³
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.

344H Bucket Selection Guide*

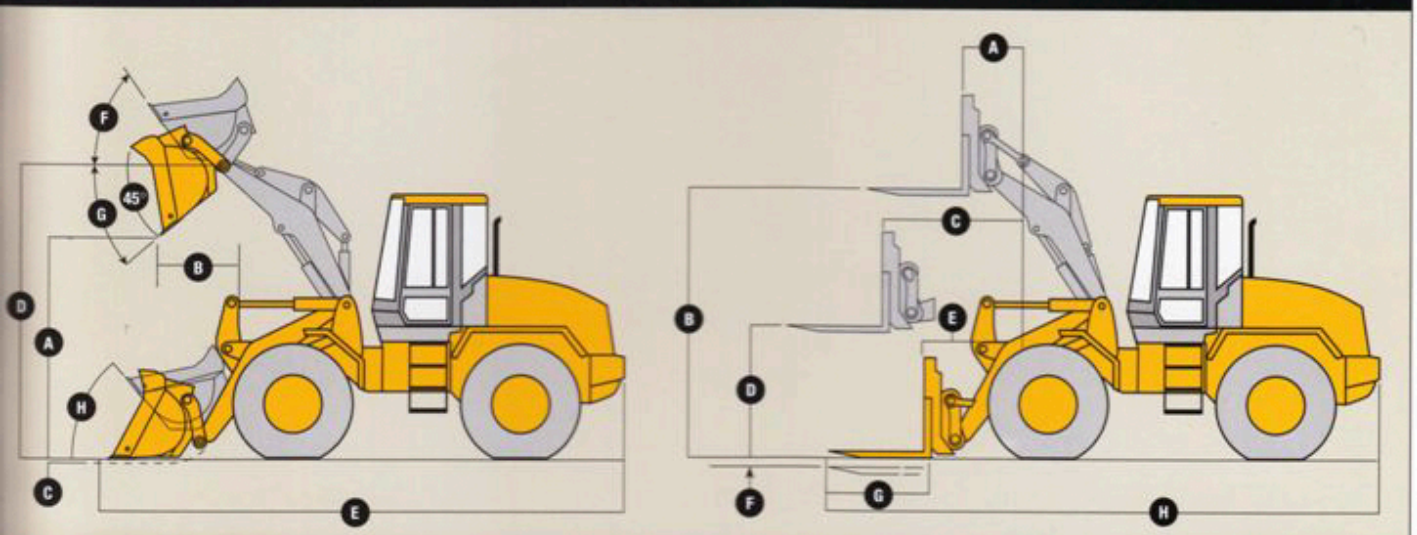


MATERIAL (Loose weight)	lb./cu. yd.	kg/m³
Caliche	2,100	1250
Cinders	1,000	590
Clay and gravel, dry	2,400	1420
Clay and gravel, wet	2,600	1540
Clay, dry	2,500	1480
Clay, natural bed	2,800	1660
Clay, wet	2,800	1660
Coal, anthracite, broken	1,850	1100
Coal, bituminous, broken	1,400	830
Earth, dry, packed	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.

Dimensions with Quick-Coupler

	304H	324H	344H
BUCKET			
A Dump clearance	▲ (see page 14)	▲ (see page 15)	▲ (see page 15)
B Dump reach	▲▲ (see page 14)	▲▲ (see page 15)	▲▲ (see page 15)
C Maximum digging depth	2.0 in. (50 mm)	3.0 in. (84 mm)	3.0 in. (83 mm)
D Height to hinge pin, fully raised	10 ft. 5 in. (3174 mm)	11 ft. 7 in. (3524 mm)	12 ft. 1 in. (3694 mm)
E Overall length	▲▲▲ (see page 14)	▲▲▲ (see page 15)	▲▲▲ (see page 15)
F Maximum rollback at full height	52 degrees	62 degrees	63 degrees
G Bucket dump at full height	42 degrees	45 degrees	45 degrees
H Maximum rollback at ground level	45 degrees	46 degrees	46 degrees



CONSTRUCTION UTILITY FORK			
A Reach, fully raised		2 ft. 8 in. (802 mm)	2 ft. 6 in. (767 mm)
B Fork height, fully raised		10 ft. 9 in. (3264 mm)	11 ft. 3 in. (3434 mm)
C Maximum reach, fork level		5 ft. 3 in. (1603 mm)	5 ft. 6 in. (1673 mm)
D Fork height, maximum reach		5 ft. 1 in. (1543 mm)	5 ft. 2 in. (1580 mm)
E Reach, ground level		3 ft. 3 in. (990 mm)	3 ft. 6 in. (1062 mm)
F Depth below ground		4 in. (95 mm)	4 in. (94 mm)
G Tine length		▲ (see page 15)	▲ (see page 15)
H Overall length		▲▲ (see page 15)	▲▲ (see page 15)
PALLET FORK			
A Reach, fully raised	2 ft. (616 mm)	2 ft. 4 in. (702 mm)	2 ft. 2 in. (667 mm)
B Fork height, fully raised	9 ft. 11 in. (3025 mm)	10 ft. 9 in. (3276 mm)	11 ft. 4 in. (3446 mm)
C Maximum reach, fork level	4 ft. 3 in. (1308 mm)	4 ft. 11 in. (1503 mm)	5 ft. 2 in. (1573 mm)
D Fork height, maximum reach	4 ft. 10 in. (1467 mm)	5 ft. 1 in. (1555 mm)	5 ft. 3 in. (1592 mm)
E Reach, ground level	2 ft. 11 in. (898 mm)	2 ft. 11 in. (879 mm)	3 ft. 1 in. (951 mm)
F Depth below ground	2 in. (47 mm)	3 in. (83 mm)	3 in. (82 mm)
G Tine length	48 in. (1219 mm)	54 in. (1370 mm)	54 in. (1370 mm)
H Overall length	19 ft. 6 in. (5951 mm)	22 ft. 2 in. (6750 mm)	22 ft. 9 in. (6922 mm)

324H Bucket Information (Quick-Coupler Type)

Bucket Type/Size	*Stockpiling and General Purpose w/Bolt-on Edge*	*Stockpiling and General Purpose w/Bolt-on Edge*
Capacity, heaped SAE	1.8 cu. yd. (1.3 m³)	1.4 cu. yd. (1.1 m³)
Capacity, struck SAE	1.4 cu. yd. (1.1 m³)	1.1 cu. yd. (0.8 m³)
Bucket width	95 in. (2400 mm)	95 in. (2400 mm)
Breakout force, SAE J732C	13,717 lb. (6222 kg)	14,568 lb. (6608 kg)
Tipping load, straight	9,035 lb. (4098 kg)	9,229 lb. (4186 kg)
Tipping load, full turn, SAE	8,265 lb. (3749 kg)	8,470 lb. (3842 kg)
▲▲ Reach, 45-degree dump, 7-ft. (2.13 m) clearance	54 in. (1363 mm)	53 in. (1353 mm)
▲▲ Reach, 45-degree dump, full height	37 in. (945 mm)	36 in. (96 mm)
▲ Dump clearance, 45 degree, full height	102 in. (2598 mm)	103 in. (2627 mm)
▲▲▲ Overall length	20 ft. (6109 mm)	19 ft. 11 in. (6068 mm)
Loader clearance circle, bucket in carry position	29 ft. 5 in. (8970 mm)	29 ft. 4 in. (8942 mm)
Operating weight	16,358 lb. (7420 kg)	15,990 lb. (7253 kg)

Loader operating information is based on machine with all standard equipment; 15.5-25, 12 PR L2 tires; standard counterweight; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

324H Fork Information (Quick-Coupler Type)

▲ Tine length/fork type	*48-in. (1220 mm) Construction Utility*	*54-in. (1370 mm) Construction Pallet*	*60-in. (1525 mm) Construction Utility*
▲▲ Overall length	22 ft. (6708 mm)	22 ft. 2 in. (6750 mm)	23 ft. (7013 mm)
Tipping load, straight (fork level, load centered on tine)	6,745 lb. (3060 kg)	7,212 lb. (3271 kg)	6,307 lb. (2861 kg)
Tipping load, full turn (fork level, load centered on tine)	6,174 lb. (2800 kg)	6,637 lb. (3010 kg)	5,763 lb. (2614 kg)
Operating weight	16,169 lb. (7334 kg)	15,637 lb. (7093 kg)	16,264 lb. (7377 kg)

344H Bucket Information (Quick-Coupler Type)

Bucket Type/Size	*Stockpiling and General Purpose w/Bolt-on Edge*	*Stockpiling and General Purpose w/Bolt-on Edge*
Capacity, heaped SAE	2.0 cu. yd. (1.5 m³)	1.8 cu. yd. (1.3 m³)
Capacity, struck SAE	1.7 cu. yd. (1.3 m³)	1.4 cu. yd. (1.1 m³)
Bucket width	94.5 in. (2400 mm)	94.5 in. (2400 mm)
Breakout force, SAE J732C	14,226 lb. (6453 kg)	15,113 lb. (6855 kg)
Tipping load, straight	10,737 lb. (4870 kg)	10,862 lb. (4927 kg)
Tipping load, full turn, SAE	9,866 lb. (4475 kg)	9,989 lb. (4531 kg)
▲▲ Reach, 45-degree dump, 7-ft. (2.13 m) clearance	57 in. (1439 mm)	56 in. (1425 mm)
▲▲ Reach, 45-degree dump, full height	35 in. (897 mm)	34 in. (860 mm)
▲ Dump clearance, 45 degree, full height	108 in. (2732 mm)	109 in. (2768 mm)
▲▲▲ Overall length	20 ft. 9 in. (6333 mm)	20 ft. 7 in. (6281 mm)
Loader clearance circle, bucket in carry position	29 ft. 9 in. (9080 mm)	29 ft. 8 in. (9048 mm)
Operating weight	17,494 lb. (7935 kg)	17,405 lb. (7895 kg)

Loader operating information is based on machine with all standard equipment; 17.5-25, 12 PR L2 tires; standard counterweight; ROPS cab; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

344H Fork Information (Quick-Coupler Type)

▲ Tine length/fork type	*48-in. (1220 mm) Construction Utility*	*54-in. (1370 mm) Construction Pallet*	*60-in. (1525 mm) Construction Utility*
▲▲ Overall length	22 ft. 7 in. (6880 mm)	22 ft. 8 in. (6922 mm)	23 ft. 7 in. (7185 mm)
Tipping load, straight (fork level, load centered on tine)	7,910 lb. (3588 kg)	8,387 lb. (3804 kg)	7,417 lb. (3364 kg)
Tipping load, full turn (fork level, load centered on tine)	7,272 lb. (3299 kg)	7,745 lb. (3513 kg)	6,811 lb. (3090 kg)
Operating weight	17,436 lb. (7909 kg)	16,905 lb. (7668 kg)	17,531 lb. (7952 kg)

304H / 324H / 344H Loaders

Key: ● Standard equipment ▲ Optional or special equipment

*See your John Deere dealer for further information.

304	324	344	Engine
●	●	●	Antifreeze, –34°F (–37°C)
●	●	●	Coolant recovery tank
●	●	●	Fan safety guard
●	●	●	Fan, sucker type, hydraulically driven, two speeds
●	●	●	Muffler, under hood with curved-end exhaust stack
●	●	●	Environmentally friendly engine oil drain
●	●	●	Engine oil cooler
●	●	●	Quick-release fuel filter and water separator
▲	▲	▲	Ether start aid (for cold starts)
▲	▲	▲	Engine coolant heater, 1,000 watts, 110 volts
▲	▲	▲	Special application: Trash screens, etc.*
			Electrical
●	●	●	Starter switch with electric fuel cutoff
●	●	●	12-volt electrical system
●	●	●	Electrical load center – Blade-type fuses / Adjacent to operator's right in console
●	●	●	Standard battery (1), 12 volt with 850 CCA, 176-min. rated reserve
▲	▲	▲	High-capacity batteries (2), 12 volt with 850 CCA, 176-min. rated reserve
●	●	●	Master electrical disconnect switch
●	●	●	Alternator, 12 volts: 60 amp on 304H, 65 amp on 324H and 344H
●	●	●	Horn (conforms to SAE J994, J1446)
●	●	●	Lights (conform to SAE 99): Driving, turn signals, flashers, stop, and taillights
●	●	●	Pre-wired for front and rear work lights
▲	▲	▲	Work lights, front (2) and rear (2)
●	●	●	Reverse warning alarm (conforms to SAE J994, J1446)
●	●	●	Multifunction monitor with audible and visual warnings: Low engine oil pressure / Engine coolant temperature / Transmission oil temperature / Parking brake indicator; Gauges and indicators: Engine coolant temperature gauge / Fuel level gauge / Speedometer / Clock / Hourmeter; Operator warning lights: Engine air filter / Battery voltage / Fasten seat belt / Parking brake applied / Forward/reverse travel direction / 1st speed range or 2nd speed range / Turn signal indicator and hazard / High-beam driving lights
●	●	●	Radio-ready cab, fused 12-volt radio electrical lead and speakers
●	●	●	Pre-wired for roof beacon

304	324	344	Power Train/Brakes
●	●	●	Hydrostatic (HST) transmission, electronic shift control, twist-grip lever, hydrostatic oil cooler, inching pedal, and two speeds forward and reverse
●	●	●	Spring-applied, hydraulically released parking brake, switch operated
●			Conventional front and rear
	●	●	Conventional-type differential rear, limited-slip front with 45% locking valve
			Hydraulic System
●	●	●	Hydraulic system oil cooler
●	●	●	Automatic bucket return-to-dig control
●	●	●	Automatic boom height kickout control
●	●	●	Reservoir sight gauge
●	●	●	Fine micron hydraulic filters, vertical mounting
●	●	●	Hydraulic lever lockout
●			Pilot-operated three-function valve with single joystick lever control for boom and bucket, and auxiliary lever for standard pin disconnect and auxiliary hydraulics
	●	●	Two-function hydraulic valve with pilot joystick control
●	▲	▲	Three-function hydraulic valve with pilot joystick control and pilot auxiliary lever for third function
▲	▲	▲	Four-function hydraulic valve with pilot joystick control and pilot auxiliary lever for third function, and switch for fourth function
▲	▲	▲	Hydraulic conversion kits, four-function valve
	▲	▲	Hydraulic conversion kits, three-function valve and four-function valve
●	●	●	Quick-coupler diagnostic ports: Priority pressure, hydraulic pump pressure, control valve pressure, and HST pressure
			Tires
●			405/70R20
	●	▲	15.5-25, 12 PR L2
	●	●	17.5-25, 12 PR L2
		▲	17.5-25, XLTA (L2 type) Michelin Radial
			Operator's Station
●	●	●	Cab (conforms to SAE J1040 APR88): ROPS/FOPS, heater/defroster, rubber-plane isolation mounted for noise/vibration reduction, intermittent front and rear windshield wipers and washers, tinted safety glass, full-width adjustable sun visor, pre-wired for radio speakers, deluxe high-back cloth seat with mechanical suspension and 2-inch (51 mm) retractable seat belt, left and right doors, one sliding window in each door
▲	▲	▲	Canopy (conforms to SAE J1040 APR88): ROPS/FOPS, rubber-plane isolation mounted for noise/vibration reduction, deluxe high-back vinyl seat with mechanical suspension and 2-inch (51 mm) retractable seat belt
▲	▲	▲	Air conditioning (factory or dealer installed)
▲	▲	▲	Seat belt, 3-in. (76 mm), with retractor
●	●	●	Storage compartment for operator's manual and other items
●	●	●	Rubber floormat
●	●	●	Tilt steering column
●	●	●	Rearview mirrors, outside (2) and inside (1) (conform to SAE J985)
●	●	●	Handholds and steps, ergonomically located and slip resistant (conform to SAE J185)
			Loader Linkage
●	●	●	Z-bar loader linkage provides "high bucket breakout"
●	●	●	Loader boom service locking bar (conforms to SAE J38)
			Buckets and Attachments
▲	▲	▲	Full line of buckets with selection of bolt-on cutting edges and teeth
●			Standard quick coupler
	▲	▲	Quick coupler which accepts JRB attachments*
▲	▲	▲	Full line of construction utility forks, pallet forks, extendible boom with hook, and other attachments*
			Other
●	●	●	Fenders, front and rear
●	●	●	Articulation locking bar (conforms to SAE J276)
●	●	●	Vandal protection, includes lockable engine enclosure and fuel fill
●	●	●	Counterweight, built-in
●	●	●	Rear bottom guard, built-in
●	●	●	Drawbar, with locking pin
▲	●	●	Lift eyes
●	●	●	Tie-downs
▲	▲	▲	Fire extinguisher
▲	▲	▲	License plate bracket
●	▲	▲	Secondary steering (304H meets ISO5010 and SAE J/ISO5010 secondary steering requirements)
▲	▲	▲	Material weighing system*

Control Owning and Operating Costs

Customer Personal Service (CPS) is part of John Deere's proactive, fix-before-fail strategy on machine maintenance that will help control costs, increase profits and reduce stress. Included in this comprehensive lineup of ongoing programs, and services are:

Fluid analysis program—tells you what's going on inside *all* of your machine's major components so you'll know if there's a problem *before* you see a decline in performance. Fluid analysis is included in most extended coverage and preventive-maintenance agreements.

Component life-cycle data—gives you vital information on the projected life span of components and lets you make informed decisions on machine maintenance by telling you approximately how many hours of use you can expect from an engine, transmission, or hydraulic pump. This information can be used to preempt catastrophic downtime by servicing major components at about 80 percent of their life cycle.

Preventive Maintenance (PM) agreements—give you a fixed cost for maintaining a machine for a given period of time. They also help you avoid downtime by ensuring that critical maintenance work gets done right and on schedule. On-site preventive maintenance service performed where and when you need it helps protect you from the expense of catastrophic failures and lets you avoid waste-disposal hassles.

Extended coverage—gives you a fixed cost for machine repairs for a given period of time so you can effectively manage costs. Whether you work in a severe-service setting or just want to spread the risk of doing business, this is a great way to custom-fit coverage for your operation. And an extended coverage contract also travels well because it's backed by John Deere and is honored by *all* Deere construction dealers.

Customer Support Advisors (CSAs)—Deere believes the CSA program lends a *personal* quality to Customer Personal Service (CPS). Certified CSAs have the knowledge and skills for helping make important decisions on machine maintenance and repair. Their mission is to help you implement a plan that's right for *your* business and take the burden of machine maintenance off your shoulders.

JOHN DEERE

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan, at standard conditions per SAE J1349 and DIN 70 020, using No. 2-D fuel at 35 API gravity. No derating is required up to 5,000 feet (1500 m) altitude for the 304H and 324H and up to 10,000 feet (3050 m) altitude for the 344H. Gross power is without cooling fan.

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on units with all standard equipment, ROPS cabs, full fuel tanks, and 175-lb. (79 kg) operators: 304H unit with 405/70R20 (no fluid) tires; 324H unit with 15.5-25, 12 PR L2 tires and standard rear counterweight; and 344H unit with 17.5-25, 12 PR L2 tires and standard rear counterweight.

DKA304H Litho in U.S.A. (04-01)