

L O A D E R S

744E



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John Deere hydraulic wet-disk brakes are mounted inboard, where they're sealed from contaminants that can cause premature wear. There are no exposed rotors, no calipers, no troublesome air system. Flushing is a cooling oil bath, they self-equalize and self-adjust for wear — eliminating the need for periodic servicing.



John Deere planetary final drives are also mounted inboard. Since gear size isn't restricted by

wheel hub diameter, larger, more durable components can be used.



Why the 744E handles massive workloads with optimum performance and long life.

John Deere's improved 6101AT 619-cu.-in. (10.1-L) diesel engine makes the 744E's increased horsepower possible. High torque rise lets the engine accelerate faster for shorter cycle times.

Induction-hardened wet-type cylinder liners eliminate hot spots and furnish excellent heat dissipation, which extends engine life and lowers oil consumption. Individually replaceable liners make all John Deere engines less expensive to rebuild than cast-in-block designs. They're easy to overhaul to original specs, too, which can usually be done without pulling the engine.

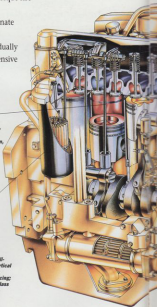


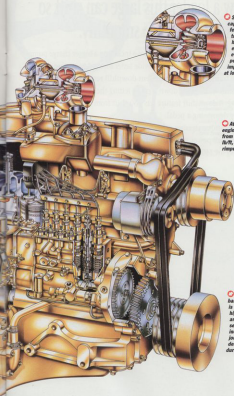
① High-rib, contoured valves, large valve ports, and specially shaped piston bowls maximize airflow and fuel mixing.



② Spin-on, combination full-flow/bypass vertical oil filter allows mess-free servicing; high-retention glass element provides superior filtration.

③ The 6101AT now includes larger exhaust valves, a better turbocharger match, longer variable van followers, less air restriction through the head, and direct cooling above the liner flange on each cylinder.





State-of-the-art, high-capacity turbocharger features redesigned turbine and compressor housings. Increased efficiency provides even greater engine performance and improved torque response at low or high rpm.

At the 250-hp level, engine torque increases from 675 lb-ft to 750 lb-ft, which boosts rimpull and acceleration.

Fuel delivery is programmed by electronically controlled injection, enhancing power and torque over a wider range of engine speeds. Injection nozzles are centered over the piston bowls for optimum fuel/air mixture, thorough combustion, and reduced hydrocarbon emissions.

Dynamically balanced crankshaft is made of forged, high-carbon steel and supported by seven main bearings; induction-hardened journal surfaces deliver excellent durability.



The electrically activated ride-control option acts as a shock absorber in the boom, helping you keep material in the bucket. It also helps smooth out your ride in roading applications, load-and-carry applications, and rough terrain.

How a loader this large can shift so easily and steer so smoothly.

Several 744E transmission upgrades – including a bigger charge pump and higher clutch pressure – provide faster forward-to-reverse shifting.

The transmission has excellent downhill retardation. You can downshift while going down a grade, letting the engine do some of the braking. A downshift feature lets you shift from second to first by simply depressing a pedal.

High-torque steering cylinder geometry and large cylinders permit smooth full power steering at all speeds through the 80-degree steering arc (40 degrees each direction).





The 744E now uses the same type of wide-angle steering valve as the 644E. Steering is 50 percent smoother and requires 25 percent less operator effort.

You'll appreciate the 744E's low-effort hydraulic controls. Dual pilot-operated hydraulic valves with one or two levers is standard.

Shown here is the optional triple-valve system, available for forks and attachments.



The 744E's constant-shaft transmission shifts electrically with these two low-effort, short-throw controls.

The single-stage torque converter with wet master clutch helps cushion direction and speed changes. You have four forward speeds and four reverse speeds.



Who wouldn't feel more comfortable (and be more productive) in a cab like this one?

The 744E's quiet, operator-friendly cab makes starting work in the morning almost as enjoyable as quitting work at the end of the day.

You'll appreciate the ample foot room and low-effort hydraulic controls. The accelerator and brake pedals are large, well placed, and angled for comfortable operation. The steering column and suspension seat are both fully adjustable. The 2-inch (15-mm) retractable seat belt is standard equipment. An optional, non-retractable 3-inch (76-mm) seat belt is also available.

The dashboard monitor system keeps tabs on vital machine functions. The spring-applied, hydraulically released park brake automatically engages when the engine is shut off. It can be manually applied with the engine running, by flipping the switch shown at far right.



You'll enjoy the superb circulation and ventilation system, with a wide entrance door that swings open and latches into place. Heating and air conditioning controls are located to the right of the accessories console.





For your convenience, the 744C's engine is now shut off with an ignition key instead of a push/pull cable. Console switches include power boost, clutch cut-off, and throttle/brake selector with differential lock.

The steering wheel features a larger, textured rim for a more comfortable grip, and a steering knob for added convenience.

Like the cab door, this side window also swings open and tilts into place. (Rear side windows that open are available as an option.)



You'll notice the superior stability right away, because of the high seat and low-cut window frames that give you a 360-degree panoramic view.

The deluxe suspension seat is one of the most versatile features on the 744C. It can be adapted to operator weight, seat cushion angle, and backrest angle. The armrests are also fully adjustable.





Attachments available for the 744E include the extendible jib boom shown here, as well as a 4.5-cu.-yd. general-purpose bucket, 60- and 72-inch forks, and many more. Also available - the quick-coupler option that lets you change attachments in almost no time, usually without leaving your seat.

Where the 744E's improved power and performance really become evident.

Handling rock and gravel in a quarry is not an application for an underpowered machine. It's where the 744E really proves itself.

Z-bar linkage gives you fast cycle times and breakout force of 42,463 pounds (189 kN). There's more bucket rollback to keep loose material from spilling. A solid rap helps clear the bucket at full dump.

Take the guesswork out of truck loading. Automatic boom height control lets you preset maximum boom height when a job doesn't require full-height loading. One touch of the loader control and the standard return-to-dig function automatically positions the bucket to start the next cycle.



For faster filling, John Deere bucket floors slope up 10 degrees toward the C-shaped backwall. Heat-treated boron-alloy-steel cutting edges last and last. And all our buckets are drilled to accept John Deere built-on cutting edges and teeth.



▶ The Z-bar linkage uses an elliptical boom cross-tube, which gives you better stability to the bucket.



Large service doors and a wide-open articulation area provide easy access to major components and service areas. The tilt cab speeds major service work.



What's easy about performing service on the 744E? Pretty much everything.

Ease of service and repair was a primary design goal for the 744E. Take a close look and you'll see how well this goal has been met.

Large service doors and a wide-open articulation area let you reach major components and service areas. Batteries are located on the outside of the frame; electrical and loader circuits are below the right front window.

The wide mainframe design makes the 744E easy to service, as well as providing better overall machine stability. Major components can be removed and replaced independently, in a surprisingly short time. The engine can be replaced in less than four hours; radiators in two hours; steering cylinders in 20 minutes.



The wide-open articulation area gives easy access to plumbing and steering components. Central grease banks help ensure that difficult lube points are serviced regularly.



Large service doors let you reach major components and service areas. The radiator and oil cooler (far right) can each be removed without disturbing the other.

ENGINE		LOAD			
Type	John Deere 6301AE Dual Horsepower Turbocharged and Aftercooled				
Rated power					
Gears 1-2	230 SAE net hp (172 kW)	240 SAE gross hp (179 kW)	@ 2,100 rpm		
Gears 2-4	230 SAE net hp (166 kW)	240 SAE gross hp (174 kW)	@ 2,000 rpm		
Cylinders	6				
Displacement	649 cu. in. (30.1 L)				
Maximum net torque					
Gears 1-2 (18% torque rise)	475 lb.-ft. (645 Nm)	@ 1,700 rpm			
Gears 2-4 (54% torque rise)	750 lb.-ft. (1020 Nm)	@ 1,700 rpm			
Lubrication	pressure system with full-flow spin-on filter and cooler				
Fuel consumption, typical	4.0 to 9.0 gal./hr. (15 to 34 L/h)				
Cooling fan	blower				
Electrical system	24 volt with 50-amp alternator				
Batteries (two 12 volt)	reserve capacity: 300 min.				
Air cleaner	dual safety element dry type, restriction indicator for service				
TRANSMISSION					
Type	torque converter/power shift				
Controls	shifts electronically with two low-effort, short-throw controls; down-shift feature lets operator shift from second to first by touching a button with the foot				
Travel speeds	Forward		Reverse		
Gear 1	4.4 mph (7.1 km/h)		4.9 mph (7.9 km/h)		
Gear 2	6.3 mph (10.7 km/h)		9.4 mph (15.1 km/h)		
Gear 3	15.1 mph (24.3 km/h)		16.6 mph (26.7 km/h)		
Gear 4	25.8 mph (41.6 km/h)		28.0 mph (45.1 km/h)		
AXLES/BRAKES					
Final drives	heavy-duty planetary, mounted inboard				
Differentials	hydraulic locking front, conventional rear				
Rear axle oscillation	± 13 degrees				
Brakes (conform to SAE J1473, ISO4480)					
Service brake	inboard-mounted hydraulic wet-disk, bathed in cooling oil, long life self-adjusting				
Parking brake	automatically spring applied, hydraulically released, dry disc brake mounted integral with transmission				
HYDRAULIC SYSTEM/STEERING					
Pump (loader and steering)	double section gear pumps, open-center system				
Maximum flow	82 gpm (309 L/min) @ 3,129 psi (21 513 kPa) and 2,100 rpm				
Pressure	loader relief 3,129 psi (21 513 kPa) steering relief 3,000 psi (20 626 kPa)				
Loader controls	two-function valve, single or double lever controls; control lever lockout feature optional three-function valve with auxiliary lever				
Hydraulic cycle times					
Raise	4.4 sec.				
Dump	1.5 sec.				
Lower	3.5 sec. (float down) / 4.2 sec. (power down)				
Maximum lift capacity	with 4.0 cu. yd. (3.1 m ³) excavating bucket				
Lift at ground level	38,040 lb. (17 250 kg)				
Lift at maximum height	21,690 lb. (9839 kg)				
Steering (conforms to SAE J1511)					
Type	power, fully hydraulic				
Relief valve setting	3,000 psi (20 626 kPa)				
Articulation angle	80-degree arc (40 degrees each direction)				
Turning radius (measured to centerline of outside tire)	20 ft. 2 in. (6.14 m)				
TIRES					
Choice of	23.5-25, 16 PR L3	23.5-25, 16 PR L3	26.5-25, 16 PR L3	26.5-25, 20 PR L3	
Tread width	88.61 in. (2280 mm)	88.61 in. (2280 mm)	88.61 in. (2280 mm)	88.61 in. (2280 mm)	
Width over tires	111 in. (2820 mm)	111 in. (2820 mm)	115.75 in. (2940 mm)	115.75 in. (2940 mm)	
Change in vertical height	- 2.5 in. (- 64 mm)	- 1.3 in. (- 28 mm)	0	+ 1.1 in. (+ 28 mm)	

CAPACITIES

244L

Fuel tank with ground level fueling	87 gal. (330 L)
Cooling system	57 qt. (53 L)
Engine lubrication, including full-flow spin-on filter	34 qt. (32 L)
Power shift transmission, including vertical cartridge filter	40 qt. (38 L)
Differential (each)	
Front	33 qt. (32 L)
Rear	35 qt. (33 L)
Loader hydraulic reservoir	130 qt. (96 L)

DIMENSIONS WITH BUCKET

1 Overall height	14 ft. 5 in. (4.44 m)
2 Height to top of cab and canopy	13 ft. 7.4 in. (3.54 m)
3 Height to top of exhaust	11 ft. 8.8 in. (3.63 m)
4 Ground clearance	20.3 in. (515 mm)
5 Length from centerline of front axle	67 in. (1,700 mm)
6 Wheelbase	134 in. (3,400 mm)
7 Maximum bucket angle	58 degrees
8 Dump height	▲
9 Height to hinge pin, fully raised	13 ft. 7.8 in. (4.16 m)
10 Digging depth	2.3 in. (58 mm)

▲ See Bucket Information below.



BUCKET INFORMATION (PW-04)

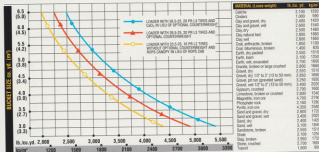
Bucket Type/Size	Stockpiling		Excavating	
	w/Body on Edge		w/Teeth	w/Body on Edge
Capacity, heaped SAE	5.0 cu. yd. (3.8 m ³)		4.75 cu. yd. (3.7 m ³)	4.25 cu. yd. (3.3 m ³)
Capacity, struck SAE	4.3 cu. yd. (3.3 m ³)		4.0 cu. yd. (3.1 m ³)	3.6 cu. yd. (2.7 m ³)
Bucket width	119.7 in. (3,040 mm)		119.7 in. (3,040 mm)	119.7 in. (3,040 mm)
Breakout force, SAE (J23C)	42,463 lb. (189 kN)		38,078 lb. (169 kN)	45,865 lb. (204 kN)
Tipping load, straight	33,735 lb. (15,311 kg)		34,130 lb. (15,481 kg)	34,136 lb. (15,484 kg)
Tipping load, 35-degree full turn, SAE	29,785 lb. (13,474 kg)		30,035 lb. (13,624 kg)	30,040 lb. (13,626 kg)
Tipping load, 40-degree full turn, SAE	28,546 lb. (12,936 kg)		28,823 lb. (13,074 kg)	28,828 lb. (13,076 kg)
Reach, 45-degree dump, 7 ft. (2.13 m) clearance	75.47 in. (1,916 mm)		78.03 in. (1,992 mm)	68.3 in. (1,735 mm)
Reach, 45-degree dump, full height	93.08 in. (2,372 mm)		94.65 in. (2,408 mm)	84.46 in. (2,148 mm)
▲ Dump clearance, 45-degree full turn, SAE	117.64 in. (2,986 mm)		113.15 in. (2,874 mm)	120.26 in. (3,053 mm)
Overall length	26 ft. 4.0 in. (8.02 m)		26 ft. 10.0 in. (8.18 m)	26 ft. 9 in. (7.92 m)
Loader clearance circle, bucket in carry position	44 ft. 3.5 in. (13.5 m)		44 ft. 8.2 in. (13.62 m)	44 ft. 1.3 in. (13.44 m)
Operating weight	46,110 lb. (21,008 kg)		46,017 lb. (20,873 kg)	45,931 lb. (20,804 kg)

Loader operating information is based on machine with all standard equipment, 26.5-23, 16.75 L2 tires, with 1,850-lb. (837 kg) optional counterweight, 8075-cu. 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 PIVOT BUCKETS**
TABLE
Adjustments to operating weights and tipping loads for 4.0 cu. yd. (3.1 m³) excavating bucket

Add (+) or deduct (-) lb. (kg) as indicated for loaders with	Operating Weight	Tipping Load, Straight	Tipping Load, 15-Degree Full Flare	Tipping Load, 40-Degree Full Flare
23.5-25, 16 PR L2 tires without CaCl ₂	-1,302 lb. (-589 kg)	-842 lb. (-382 kg)	-741 lb. (-336 kg)	-711 lb. (-323 kg)
23.5-25, 16 PR L2 tires with CaCl ₂ in lieu of optional counterweight	+399 lb. (+181 kg)	+633 lb. (+287 kg)	+557 lb. (+253 kg)	+535 lb. (+243 kg)
23.5-25, 16 PR L3 tires without CaCl ₂	-785 lb. (-356 kg)	-560 lb. (-252 kg)	-493 lb. (-223 kg)	-473 lb. (-214 kg)
23.5-25, 16 PR L3 tires with CaCl ₂ in lieu of optional counterweight	+716 lb. (+325 kg)	+675 lb. (+307 kg)	+770 lb. (+349 kg)	+739 lb. (+335 kg)
26.5-25, 16 PR L2 tires with CaCl ₂ in lieu of optional counterweight	+2,387 lb. (+1083 kg)	+2,626 lb. (+1192 kg)	+2,486 lb. (+1128 kg)	+2,386 lb. (+1082 kg)
26.5-25, 20 PR L3 tires without CaCl ₂	+494 lb. (+224 kg)	+377 lb. (+171 kg)	+332 lb. (+150 kg)	+318 lb. (+144 kg)
26.5-25, 20 PR L3 tires with CaCl ₂ in lieu of optional counterweight	+2,881 lb. (+1307 kg)	+3,203 lb. (+1453 kg)	+2,828 lb. (+1278 kg)	+2,748 lb. (+1245 kg)
Roll-on edge and skid shoes removed	-990 lb. (-450 kg)	+1,235 lb. (+570 kg)	+1,185 lb. (+539 kg)	+1,060 lb. (+480 kg)
ROPS canopy in lieu of ROPS cab	-287 lb. (-130 kg)	-273 lb. (-124 kg)	-240 lb. (-109 kg)	-231 lb. (-105 kg)
Bucket teeth	-637 lb. (-288 kg)	+644 lb. (+293 kg)	+567 lb. (+257 kg)	+545 lb. (+247 kg)
Optional counterweight removed*	-1,650 lb. (-747 kg)	-2,412 lb. (-1094 kg)	-2,123 lb. (-963 kg)	-2,027 lb. (-924 kg)
Optional bottom guards	+346 lb. (+157 kg)	+313 lb. (+142 kg)	+276 lb. (+125 kg)	+265 lb. (+120 kg)

*Optional counterweight not to be used when CaCl₂ or other ballast is used in the tires.

BUCKET SELECTION GUIDE*


* This guide, representing buckets not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density and loader configuration. However, specific bucket size should only be determined after adding or subtracting all the tipping load changes due to specifications.

