

744E



MASTER

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ENGINE

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Type	John Deere 6101AT 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	250 SAE net hp (186 kW), 260 SAE gross hp (194 kW) @ 2,000 rpm		
Cylinders	6		
Displacement	619 cu. in. (10.1 L)		
Maximum net torque			
Gears 1-2 (18% torque rise)	675 lb.-ft. (915 Nm) @ 1,700 rpm		
Gears 2-4 (34% 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	<i>Forward</i>	<i>Reverse</i>	
Gear 1	4.4 mph (7.1 km/h)	4.9 mph (7.9 km/h)	
Gear 2	8.5 mph (13.7 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, ISO3450)			
Service brakes	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 (310 L/m) @ 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	6.4 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. (17 255 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 L2	23.5-25, 16 PR L3	26.5-25, 16 PR L2	26.5-25, 20 PR L3
Tread width	88.61 in. (2200 mm)	88.61 in. (2200 mm)	88.61 in. (2200 mm)	88.61 in. (2200 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)	- 1.1 in. (- 28 mm)	0	+ 1.1 in. (+ 28 mm)

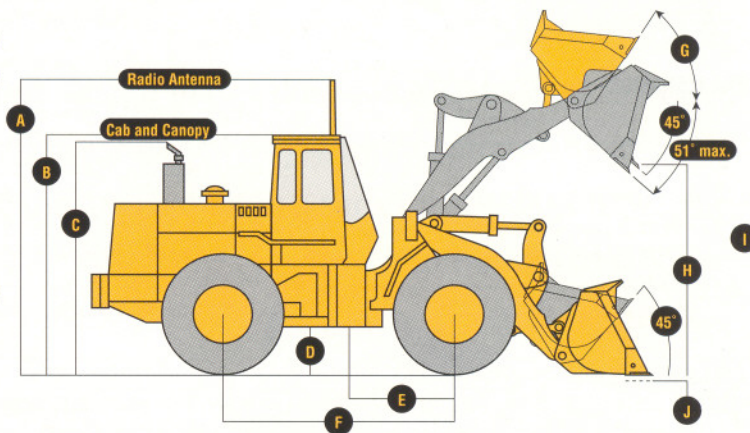
CAPACITIES

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Fuel tank with ground level fueling.....	87 gal. (330 L)
Cooling system.....	57 qt. (55 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.....	170 qt. (161 L)

DIMENSIONS WITH BUCKET

- A** Overall height.....14 ft. 5 in. (4.44 m)
 - B** Height to top of cab and canopy11 ft. 7.4 in. (3.54 m)
 - C** Height to top of exhaust11 ft. 3.8 in. (3.45 m)
 - D** Ground clearance20.3 in. (515 mm)
 - E** Length from centerline of front axle67 in. (1700 mm)
 - F** Wheelbase134 in. (3400 mm)
 - G** Maximum bucket angle58 degrees
 - H** Dump height.....▲
 - I** Height to hinge pin, fully raised.....13 ft. 7.8 in. (4.16 m)
 - J** Digging depth.....2.3 in. (58 mm)
- ▲ See Bucket Information below.



BUCKET INFORMATION (PIN-ON)

Bucket Type/Size	<i>Stockpiling w/Bolt-on Edge</i>	<i>Stockpiling w/Teeth</i>	<i>Excavating w/Bolt-on Edge</i>	<i>Excavating w/Teeth</i>
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)	4.0 cu. yd. (3.1 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)	3.35 cu. yd. (2.6 m ³)
Bucket width	119.7 in. (3.04 m)	119.7 in. (3.04 m)	119.7 in. (3.04 m)	119.7 in. (3.04 m)
Breakout force, SAE J732C	42,463 lb. (189 kN)	38,078 lb. (169 kN)	45,885 lb. (204 kN)	40,770 lb. (181 kN)
Tipping load, straight.....	33,755 lb. (15 311 kg)	34,130 lb. (15 481 kg)	34,136 lb. (15 484 kg)	34,507 lb. (15 652 kg)
Tipping load, 35-degree full turn, SAE.....	29,705 lb. (13 474 kg)	30,035 lb. (13 624 kg)	30,040 lb. (13 626 kg)	30,367 lb. (13 774 kg)
Tipping load, 40-degree full turn, SAE.....	28,506 lb. (12 930 kg)	28,823 lb. (13 074 kg)	28,828 lb. (13 076 kg)	29,141 lb. (13 218 kg)
Reach, 45-degree dump, 7-ft. (2.13 m) clearance	73.47 in. (1866 mm)	78.03 in. (1982 mm)	68.3 in. (1735 mm)	76.03 in. (1931 mm)
Reach, 45-degree dump, full height.....	50.08 in. (1272 mm)	54.65 in. (1388 mm)	46.46 in. (1180 mm)	54.17 in. (1376 mm)
▲ Dump clearance, 45 degree, full height.....	117.64 in. (2988 mm)	113.15 in. (2874 mm)	120.20 in. (3053 mm)	115.73 in. (2939 mm)
Overall length	26 ft. 4.0 in. (8.02 m)	26 ft. 10.0 in. (8.18 m)	26 ft. 0 in. (7.92 m)	26 ft 6.0 in. (8.08 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. 1.1 in. (13.44 m)	44 ft. 5.9 in. (13.56 m)
Operating weight	46,310 lb. (21 006 kg)	46,017 lb. (20 873 kg)	45,931 lb. (20 834 kg)	45,638 lb. (20 701 kg)

Loader operating information is based on machine with all standard equipment, 26.5-25, 16 PR L2 tires, with 1,050-lb. (477 kg) optional counterweight, 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 PIN-ON BUCKETS

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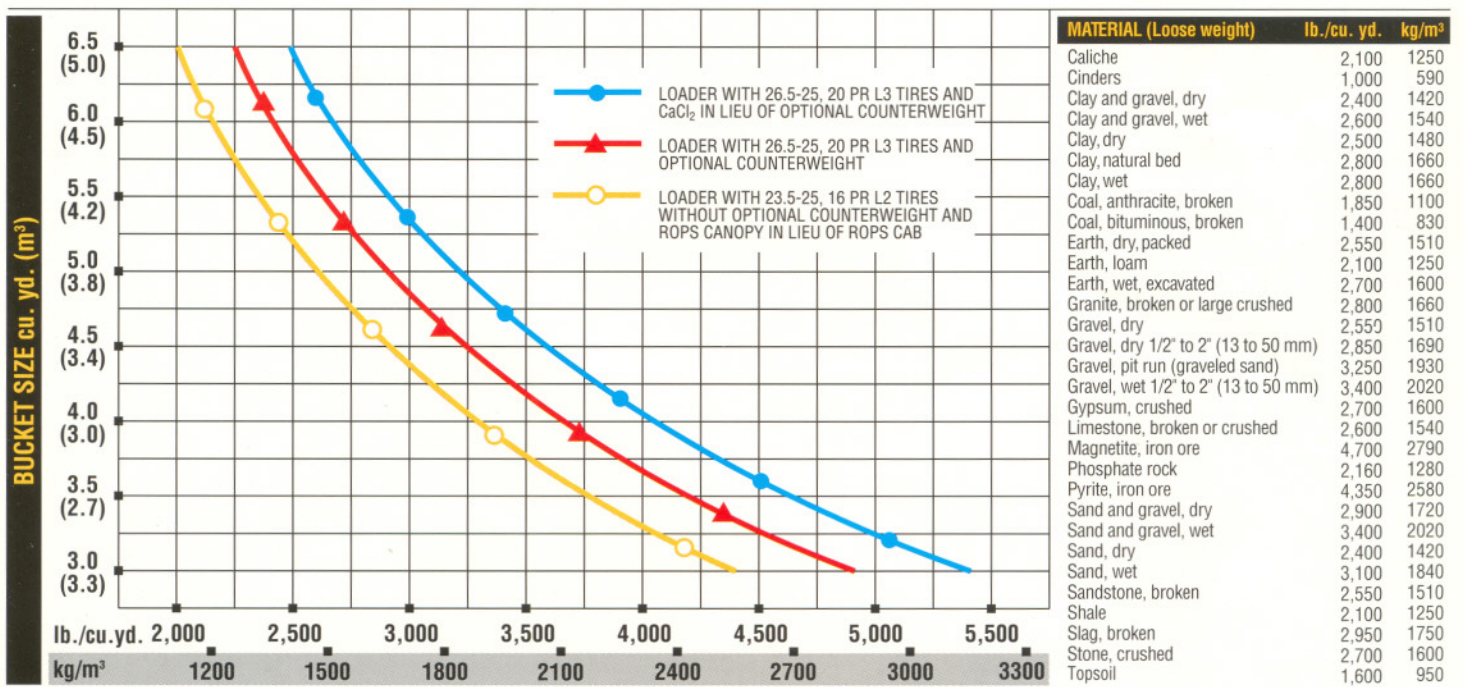
Adjustments to operating weights and tipping loads for 4.0 cu. yd. (3.1 m³) excavating bucket

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

loaders with	Operating Weight	Tipping Load, Straight	Tipping Load, 35-Degree Full Turn	Tipping Load, 40-Degree Full Turn
23.5-25, 16 PR L2 tires without CaCl ₂	- 1,102 lb. (- 500 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. (- 272 kg)	- 493 lb. (- 239 kg)	- 473 lb. (- 230 kg)
23.5-25, 16 PR L3 tires with CaCl ₂ in lieu of optional counterweight.....	+ 716 lb. (+ 325 kg)	+ 875 lb. (+ 397 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)	+ 2,826 lb. (+ 1282 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)	+ 2,745 lb. (+ 1245 kg)
Bolt-on edge and skid shoes removed	- 990 lb. (- 450 kg)	+ 1,255 lb. (+ 570 kg)	+ 1,105 lb. (+ 500 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	- 507 lb. (- 230 kg)	+ 644 lb. (+ 292 kg)	+ 567 lb. (+257 kg)	+ 545 lb. (+ 247 kg)
Optional counterweight removed*	- 1,050 lb. (- 477 kg)	- 2,412 lb. (- 1094 kg)	- 2,123 lb. (- 963 kg)	- 2,037 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 specification.