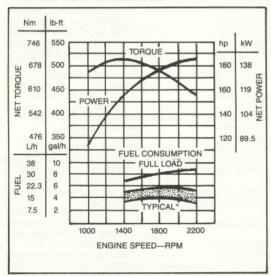


644E-H LOADER



ENGINE PERFORMANCE



*Depending on operating variables

FEATURES

185 SAE net hp (138 kW) John Deere turbocharged diesel engine

Four-wheel drive

3.75 or 4.0 cu. yd. (2.8 or 3.1 m³) general purpose buckets or 3.5 cu. yd. (2.7 m³) multipurpose bucket

Single-phase, single-stage torque converter with countershaft, Power Shift transmission, 4 speeds forward, 3 reverse

Power steering. Articulated frame

Four-wheel wet-disk power brakes and parking brake

Inboard planetary final drives

Single-lever or optional two-lever control with optional automatic return-to-dig and optional boom height control

Optional front axle hydraulic differential lock or NoSPIN front differential

Optional vandal protection

Rollover protective structure (ROPS) with canopy. Meets criteria of SAE J394a, SAE J1040 APR88, OSHA 1926.1001, and ISO 3471. Also meets FOPS (falling object protective structure) criteria SAE J231 JAN 81 and ISO 3449.

ADD VERSATILITY WITH:

Auxiliary bucket spill guard
Auxiliary bucket skid shoes
Bolt-on cutting edge
Bucket teeth
Coupler system
Forks

Side-dump bucket

Snow plows

Special buckets

644E-H LOADER SPECIFICATIONS

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE Standards. Except where otherwise noted, specifications are based on a machine with all standard equipment, 23.5-25, 12 PR, L2 tires, two batteries, ROPS cab, full fuel tank, and 175 lb. (80 kg) operator.

are based on a machine with all standard equipment, 23.5-25, 12 PR, L2 tires, two batteries,	ROPS
Rated Power @ 2200 rpm: SAE DIN 70 020 Net	T 2 2
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 @ 35 API gravity. No derating is required up to 10,000 feet (3050 m) altitude. Gross power is without cooling fan.	2 2 2 2
Engine: John Deere 6076A Type 4-stroke cycle, turbocharged aftercooled diesel Bore and stroke	F
Displacement	T F
Batteries (two 12 volt) 25 amps at 80°F (27°C) Reserve capacity: 160 min. each BCI group 31 cold cranking capacity at 0°F (- 18°C)	A
Torque Converter: Type	E
Transmission Countershaft, Power Shift	
Forward Speeds: mph km/h	F
1 4.8 7.7 2	
3	
Reverse Speeds: 4.8 7.7	
2 7.6 12.2 3 16.4 26.4	
	Н
Differentials - choice of: Front and rear conventional Front hydraulic differential lock and rear conventional Front NoSPIN and rear conventional	Ĺ
Drive Axles Inboard-mounted planetary gears to each wheel. Front axle fixed. Rear axle oscillates 26-degrees total (36.1 in. [916 mm] vertical travel at center of tire).	C
Steering: Full power steering. Frame articulated 80 degrees by two hydraulic cylinders. Turning radius (measured to centerline of	
outside tire)	В
Brakes:	D
Service Power-actuated, 4-wheel inboard-mounted, wet disk. Foot-operated by either pedal. Parking	
expanding shoe on transmission, output shaft, foot-operated. Includes transmission disconnect with 2-level monitor warning.	E
Hydraulic Systems: Steering and loader functions An engine-driven gear-type pump delivers 65.5 gpm (248 L/min) at 600 psi (4137 kPa)	
(42.2 kg/cm²) and 2200 engine rpm. Loader function relief valve pressure setting is 2850 psi (19 651 kPa) (200.4 kg/cm²). The maximum steering pressure is 2600 psi (17 927 kPa) (182.7 kg/cm²). Control Single-lever or optional dual-lever, dual hydraulic valve.	F
Optional triple hydraulic valve for fork or multipurpose bucket. Brakes An engine-driven, axial piston pump delivers 8.1 gpm (31 L/min) at 2200 engine rpm and 600 psi (4137 kPa) (42.2 kg/cm²). Maximum system pressure is 2300 psi (15 859	
kPa) (161.7 kg/cm²). Loader hydraulic operating cycle times at full throttle: Raise	
power	Н
Hydraulic Cylinders: Bore Stroke Boom, two 6.30 in. (160 mm) 26.77 in. (680 mm) Bucket, one 7.09 in. (180 mm) 24.45 in. (621 mm) Cylinder rods	

Tires — choice of:
20.5-25, 12 PR, loader tread, L2
20.5-25, 16 PR, loader tread, L2
20.5-25, 16 PR, rock tread, L3
20.5 R25, One Star, L2 equivalent
23.5-25, 12 PR, loader tread, L2
23.5-25, 20 PR, rock tread, L3

Capacities:	U.S.	Liters
Fuel tank	75 gal.	284
Cooling system	30 qt.	28.5
Crankcase	23 qt.	22
Crankcase, including filter		24
Transmission case and filters	14 qt.	13
Front differential		23
Rear differential		23
Loader hydraulic sump	120 qt.	115

Additional Standard Equipment: Differential, conventional, front and rear

Engine: Antifreeze Fan guard Fuel filter

Heavy-duty battery package w/two batteries Muffler

Frames:

Articulation transport lock Drawbar Lockable engine side shields

and rear grille Rear bottom guard Service step, left-hand rear

Standard counterweights, 910 lb. (413 kg) and 1138 lb. (516 kg) Hydraulic oil cooler

Lights:
Driving w/guard Flashing and turn signal

Stop and tail Operator's station:

Adjustable, deluxe vinyl seat Cigarette lighter w/ashtray Dual inside rearview mirrors Dual level monitor system:

Two level warnings:

Optional or Special Equipment: Buckets:

Auxiliary spill guard Bolt-on cutting edges Bucket teeth

Differentials:

Front axle disconnect Front hydraulic differential lock

Front NoSPIN differential

Engine:

Alternator—130 amp Cold weather (ether) starting aid Engine coolant heater Radiator sand shield Water separator, fuel

Frames:

Auxiliary bottom guards, transmission and front frame

Fenders, front or rear

Lift hooks License plate bracket Rear counterweights

Steps, frame mounted w/access platform

SMV emblem

Transmission side frame guards

hydraulics:

control

chrome-plated, polished . . . 3.15 in. (80 mm) dia.

3.15 in. (80 mm) dia.

Boom cylinder rods . .

Bucket cylinder rod

Two spool valve w/singlelever control Two spool valve w/two-lever

Three spool valve, single-

Parking brake on Single-level warnings: Air filter restricted Engine coolant temperature Hydraulic filter restricted Lów brake pressure Low electrical voltage Low engine oil pressure Low transmission oil pressure Secondary steering (optional) Indicator only: Turn signals Floor mat Hand grips Horn Instruments: Electric hourmeter Fuel gauge Transmission oil temperature gauge Key switch RÓPS canopy Two-inch (51 mm) seat belt w/retractor Reverse warning alarm

lever control w/auxiliary control lever for third function Three spool valve, two-lever control w/auxiliary control lever for third function

Transmission clutch disconnect

Transmission oil cooler

Lights: Front and rear work Loader: Automatic boom height

control Automatic return-to-dig

Operator's station: Mirrors, outside

Radio-AM/FM for cab ROPS cab w/heater-defrosterpressurizer, dome light,

front and rear windshield wiper and washer, 90-amp alternator ROPS cab w/air conditioning,

heater/defroster/pressurizer dome light, front and rear windshield wiper and washer, 90-amp alternator

Seats

Adjustable deluxe suspension vinyl seat w/armrests Adjustable deluxe suspension cloth seat w/armrests for cab Secondary steering Three-inch (76 mm) seat

belt w/o retractor

Bucket Type					
OPERATING INFORMATION	General Purpose	General Purpose*	Multipurpose*		
Capacity, heaped, SAE	3.75 cu. yd. (2.8 m³)	4.0 cu. yd. (3.1 m³)	3.5 cu. yd. (2.68 m³)		
Capacity, struck, SAE	3.16 cu. yd. (2.42 m³)	3.63 cu. yd. (2.79 m³)	2.94 cu. yd. (2.25 m³)		
Bucket width	114 in. (2.90 m)	114 in. (2.90 m)	114 in. (2.90 m)		
Breakout force, SAE J732C	34,257 lb. (152.4 kN) (15 536 kg)	35,048 lb. (155.9 kN) (15 895 kg)	31,926 lb. (142.0 kN) (14 479 kg)		
Tipping load, straight	29,435 lb. (13 352 kg)	29,002 lb. (13 155 kg)	25,435 lb. (11 537 kg)		
Tipping load, 40-deg. full turn, SAE	24,848 lb. (11 269 kg)	24,414 lb. (11 072 kg)	21,194 lb. (9612 kg)		
Reach at 45-deg. dump, 7 ft. (2.13 m) clearance	61.81 in. (1570 mm)	60.70 in. (1542 mm)	61.77 in. (1569 mm)		
Reach at 45-deg. dump, full height	39.50 in. (1003 mm)	37.74 in. (959 mm)	40.43 in. (1027 mm)		
Dump clearance at 45-deg. dump, full height	114.6 in. (2911 mm)	115.9 in. (2944 mm)	112.7 in. (2863 mm)		
Overall length	25 ft. 9.1 in. (7.85 m)	25 ft. 7.1 in. (7.80 m)	26 ft. 1.7 in. (7.97 m)		
Loader clearance circle, bucket in carry position	41 ft. 7.3 in. (12.68 m)	42 ft. 2.8 in. (12.87 m)	42 ft. 8 in. (13.00 m)		
Operating weight	35,306 lb. (16 015 kg)	35,820 lb. (16 248 kg)	37,432 lb. (16 979 kg)		

^{*}Allied equipment ordered through John Deere dealer

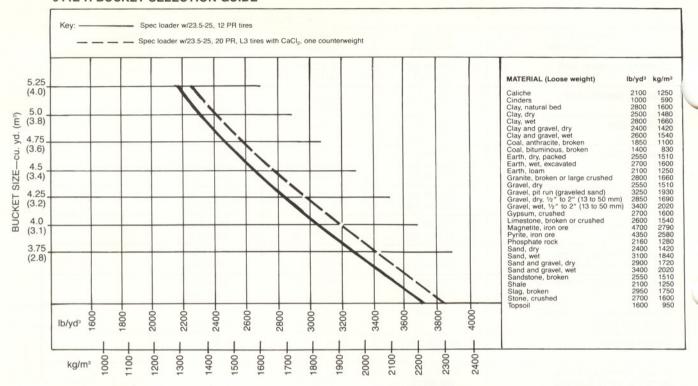
Loader operating information is based on machine with all standard equipment, 23.5-25, 12 PR, L2 tires, two batteries, ROPS cab, full fuel tank and 175-lb. (80 kg) operator. Operating information is affected by tire size, ballast and attachments. For selected items, add or subtract the following:

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

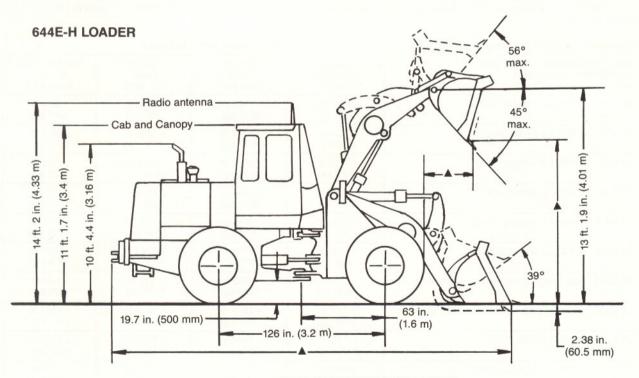
Add (+) or deduct (-) lb. (kg) as indicated for loaders with:	Loader	Tipping	Tipping	Tipping Load
	Operating	Load	Load	40° Full
	Weight	Straight	35° Turn	Turn, SAE
20.5-25, 12 PR, L2 without CaCl ₂	– 1587 kb,	- 1142 kb,	- 1014 lb.	- 985 lb.
	(720 kg)	(518 kg)	(460 kg)	(447 kg)
20.5-25, 12 PR, L2 with CaCl ₂ **	+ 234 lb.	+ 1477 lb.	+ 1316 lb.	+ 1276 lb.
	(106 kg)	(670 kg)	(597 kg)	(579 kg)
20.5-25, 16 PR, L2 without CaCl ₂	- 1499 lb.	– 1078 lb.	- 959 lb.	- 930 lb.
	(680 kg)	(489 kg)	(435 kg)	(422 kg)
20.5-25, 16 PR, L2 with CaCl ₂ **	+ 322 lb.	+ 1541 lb.	+ 1373 lb.	+ 1332 lb.
	(146 kg)	(699 kg)	(623 kg)	(604 kg)
20.5-25, 16 PR, L3 without CaCl ₂	- 1235 lb.	– 886 lb.	- 789 lb.	- 767 lb.
	(560 kg)	(402 kg)	(358 kg)	(348 kg)
20.5-25, 16 PR, L3 with CaCl ₂ **	+ 586 lb.	+ 1731 lb.	+ 1543 lb.	+ 1497 lb.
	(266 kg)	(785 kg)	(700 kg)	(679 kg)
20.5R25, One Star, L2 equivalent without CaCl ₂	- 1120 lb.	– 805 lb.	– 717 lb.	- 694 lb.
	(508 kg)	(365 kg)	(325 kg)	(315 kg)
20.5R25, One Star, L2 equivalent with CaCl ₂ **	+ 701 lb.	+ 1812 lb.	+ 1616 lb.	+ 1567 lb.
	(318 kg)	(822 kg)	(733 kg)	(711 kg)
23.5-25, 12 PR, L2 with CaCl ₂ **	+ 2396 lb.	+ 3446 lb.	+ 3069 lb.	+ 2978 lb.
	(1087 kg)	(1563 kg)	(1392 kg)	(1351 kg)
23.5-25, 20 PR, L3 without CaCl ₂	+ 494 lb.	+ 355 lb.	+ 317 lb.	+ 309 lb.
	(224 kg)	(161 kg)	(144 kg)	(140 kg)
23.5-25, 20 PR, L3 with CaCl ₂ **	+ 2890 lb.	+ 3801 lb.	+ 3386 lb.	+ 3285 lb.
	(1311 kg)	(1724 kg)	(1536 kg)	(1490 kg)
ROPS canopy in lieu of ROPS cab	– 320 lb.	– 302 lb.	- 282 lb.	- 278 lb.
	(145 kg)	(137 kg)	(128 kg)	(126 kg)
Bucket teeth	+ 262 lb.	- 331 lb.	- 326 lb.	- 324 lb.
	(119 kg)	(150 kg)	(148 kg)	(147 kg)
Without second counterweight	– 1138 lb.	- 2626 lb.	- 2246 lb.	- 2156 lb.
	(516 kg)	(1191 kg)	(1019 kg)	(978 kg)

^{**}CaCl₂ not to be used with two standard counterweights. If CaCl₂ is used, remove second counterweight.

644E-H 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 configurations. However, specific bucket size should only be determined after adding or subtracting all the tipping load changes due to specifications.



▲ SEE OPERATING INFORMATION

TIRES



 23.5-25

 Tread width
 82.05 in.

 (2084 mm)

 Width over tires
 107.44 in.

 (2729 mm)

