



MASTER

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544E

LOADER WITH COUPLER



**SAE Net
Horsepower**

115 hp
(86 kW)

**Buckets
Range to**

2.63 cu. yd.
(2.0 m³)

**Operating
Weights to**

23,451 lb.
(10 637 kg)

Model shown may include options



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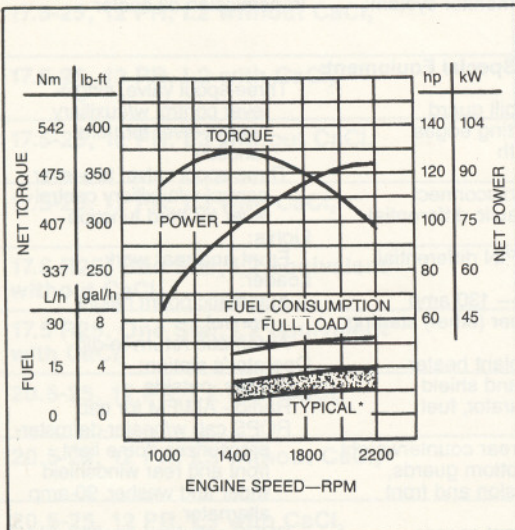
544E-H LOADER

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Model shown may include options

ENGINE PERFORMANCE



*Depending on operating variables

FEATURES

125 SAE net hp (93 kW) John Deere turbocharged diesel engine

Four-wheel drive

2.50 or 2.75 cu. yd. (1.9 or 2.1 m³) general purpose buckets or 2.13 cu. yd. (1.6 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 loader control w/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 JAN81 and ISO 3449.

ADD VERSATILITY WITH:

- Auxiliary bucket skid shoes
- Auxiliary bucket spillguard
- Bolt-on cutting edge
- Bucket teeth
- Coupler system
- Forks
- Side-dump bucket
- Snow plows
- Special buckets

544E-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, 20.5-25, 12 PR, L2 tires with lift hooks, two batteries, ROPS cab, full fuel tank, and 175-lb. (80 kg) operator.

Rated Power @ 2200 engine rpm:	SAE	DIN 70 020
Net	125 hp (93 kW)	93 kW
Gross	130 hp (97 kW)	

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.

Engine: John Deere 6359T

Type	4-stroke cycle, turbocharged diesel
Bore and stroke	4.19 x 4.33 in. (106.5 x 110 mm)
No. of cylinders	6
Displacement	359 cu. in. (5.884 L)
Maximum net torque @ 1400 rpm	372 lb-ft (504 Nm) (51.4 kg-m)
Cooling fan	Blower
Air cleaner w/restriction indicator	Dry type
Electrical system	12 volt w/65 amp alternator
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)	625 amp

Torque Converter:

Type	Single phase, single stage
Torque multiplication	2.91 to 1

Transmission Countershaft, Power Shift

Forward Speeds:

	mph (max.)	km/h (max.)
1	4.8	7.7
2	8.2	13.2
3	17.9	28.8
4	25.4	40.9

Reverse Speeds:

1	4.8	7.7
2	8.2	13.2
3	17.9	28.8

Differentials — choice of:
 Front and rear conventional
 Front hydraulic differential lock and rear conventional
 Front NoSPIN and rear conventional

Drive Axles Inboard-mounted planetary gears to each wheel. Front axle fixed. Rear axle oscillates 22 degrees total (28.6 in. [727 mm] vertical travel at center of tire).

Steering Full power steering. Frame articulated 80 degrees by two hydraulic cylinders.
 Turning radius (measured to centerline of outside tire) 16 ft. 2.2 in. (4.93 m)
 Cylinder size: Stroke 19.29 in. (490 mm)
 Bore 2.76 in. (70 mm)
 Rod diameter 1.57 in. (40 mm)

Brakes:
 Service Power-actuated, 4-wheel inboard-mounted, wet disk. Foot-operated by either pedal.
 Parking 9.84 x 2.36 in. (250 x 60 mm) expanding shoe on transmission output shaft, foot-operated.
 Includes transmission disconnect with two-level monitor warning.

Hydraulic Systems:
 Steering and loader functions An engine-driven gear-type pump delivers 46.3 gpm (175 L/min) at 600 psi (4137 kPa) (42.2 kg/cm²) and 2200 engine rpm. Loader function relief valve pressure setting is 2750 psi (18 961 kPa) (193.4 kg/cm²). Maximum steering pressure is 2600 psi (17 927 kPa) (182.7 kg/cm²).
 Control ... Single-lever or optional two-lever, dual hydraulic valve. Optional triple hydraulic valve for fork or multipurpose bucket.
 Brakes 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	5.8 sec.
Dump	1.4 sec.
Lowering: float	3.2 sec.
power	3.9 sec.

Maximum lift capacity with 2.5 cu. yd. (1.9 m³) general purpose bucket:
 Maximum height 11,374 lb. (5159 kg)
 Ground level 21,226 lb. (9628 kg)

Hydraulic Cylinders:

	Bore	Stroke
Boom, two	4.92 in. (125 mm)	30.71 in. (780 mm)
Bucket, one	5.51 in. (140 mm)	21.57 in. (548 mm)
Cylinder rods	Ground, heat-treated, chrome-nickel-plated, polished	
Boom cylinder rods	2.48 in. (63 mm) dia.	
Bucket cylinder rod	2.48 in. (63 mm) dia.	

Tires — choice of:
 17.5-25, 12 PR, loader tread, L2
 17.5-25, 12 PR, rock tread, L3
 17.5 R25, One Star, L2 equivalent
 20.5-25, 12 PR, loader tread, L2
 20.5-25, 12 PR, rock tread, L3

Capacities:

	U.S.	Liters
Fuel tank	55 gal.	208
Cooling system	25 qt.	24
Crankcase	18 qt.	17
Crankcase, including filter	20 qt.	19
Transmission case and filters	10 qt.	9.5
Front differential	17 qt.	16
Rear differential	17 qt.	16
Loader hydraulic sump	80 qt.	76

Additional Standard Equipment:

Differential, conventional, front and rear	Two level warnings: Parking brake on
Engine:	Single-level warnings: Air filter restricted
Antifreeze	Engine coolant temperature
Fan guard	Hydraulic filter restricted
Fuel filter	Low brake pressure
Heavy-duty battery package w/two batteries	Low electrical voltage
Muffler	Low engine oil pressure
Precleaner and dry type air cleaner	Low transmission oil pressure
Frames:	Secondary steering (optional)
Articulation transport lock	Indicator only: Turn signals
Drawbar	Floor mat
Lift hooks	Hand grips
Lockable engine side shields and rear grille	Horn
Rear bottom guard	Instruments: Electric hourmeter
Service step, left-hand rear	Fuel gauge
Standard counterweight, 790 lb. (358 kg)	Transmission oil temperature gauge
Hydraulic oil cooler	Key switch
Lights:	ROPS canopy
Driving w/guard	Two-inch (51 mm) seat belt w/retractor
Flashing and turn signal	Reverse warning alarm
Stop and tail	Transmission clutch disconnect
Operator's station:	Transmission oil cooler
Adjustable, deluxe vinyl seat	
Cigarette lighter w/ashtray	
Dual inside rearview mirrors	
Dual level monitor system:	

Optional or Special Equipment:

Buckets:	Three-spool valve, single-lever control w/auxiliary control lever for third function
Auxiliary spill guard	
Bolt-on cutting edges	
Bucket teeth	
Differentials:	Three-spool valve, two-lever control w/auxiliary control lever for third function
Front axle disconnect	
Front hydraulic differential lock	
Front NoSPIN differential	
Engine:	Lights: Front and rear work
Alternator — 130 amp	Loader: Automatic boom height control
Cold weather (ether) starting aid	Automatic return-to-dig
Engine coolant heater	Operator's station: Mirrors, outside
Radiator sand shield	Radio - AM/FM for cab
Water separator, fuel	ROPS cab w/heater-defroster-pressurizer, dome light, front and rear windshield wiper and washer, 90-amp alternator
Frames:	ROPS cab w/air conditioning, heater/defroster/pressurizer, dome light, front and rear windshield wiper and washer, 90-amp alternator
Additional rear counterweight	
Auxiliary bottom guards, transmission and front frame	
Fenders, front or rear	
License plate bracket	
Steps, frame mounted	
SMV emblem	
Transmission side frame guards	
Hydraulics:	Seats: Adjustable deluxe suspension vinyl seat w/armrests
Two spool valve w/single-lever control	Adjustable deluxe suspension cloth seat w/armrests for cab
Two spool valve w/two-lever control	Secondary steering
	Three-inch (76 mm) seat belt w/o retractor

544E-H LOADER OPERATING INFORMATION

OPERATING INFORMATION	Bucket Type		
	General Purpose	General Purpose w/ Bolt-on Edge & Spillguard*	Multipurpose**
Capacity, heaped, SAE	2.50 cu. yd. (1.9 m ³)	2.75 cu. yd. (2.1 m ³)	2.12 cu. yd. (1.6 m ³)
Capacity, struck, SAE	2.12 cu. yd. (1.62 m ³)	2.41 cu. yd. (1.84 m ³)	1.77 cu. yd. (1.35 m ³)
Bucket width	100.4 in. (2.55 m)	100.4 in. (2.55 m)	100.4 in. (2.55 m)
Breakout force, SAE J732C	20,558 lb. (91.4 kN) (9325 kg)	20,466 lb. (91.0 kN) (9283 kg)	19,114 lb. (85.0 kN) (8670 kg)
Tipping load, straight	17,496 lb. (7936 kg)	17,441 lb. (7911 kg)	15,410 lb. (6990 kg)
Tipping load, 40-deg. full turn, SAE	15,000 lb. (6804 kg)	14,945 lb. (6779 kg)	13,098 lb. (5941 kg)
Reach at 45-deg. dump, 7 ft. (2.13 m) clearance	56.50 in. (1435 mm)	56.50 in. (1435 mm)	48.94 in. (1243 mm)
Reach at 45-deg. dump, full height	36.38 in. (924 mm)	36.38 in. (924 mm)	31.93 in. (811 mm)
Dump clearance at 45-deg. dump, full height	112.3 in. (2852 mm)	112.3 in. (2852 mm)	106.3 in. (2701 mm)
Overall length	22 ft. 7.9 in. (6.91 m)	22 ft. 7.9 in. (6.91 m)	23 ft. 0.5 in. (7.02 m)
Loader clearance circle, bucket in carry position	37 ft. 6.3 in. (11.44 m)	37 ft. 6.3 in. (11.44 m)	37 ft. 9 in. (11.51 m)
Operating weight	23,384 lb. (10 607 kg)	23,504 lb. (10 661 kg)	24,341 lb. (11 041 kg)

*Auxiliary spillguard is dealer installed. The spillguard is primarily intended to prevent spillage of loose material. However, it does increase bucket capacity which can be utilized in loose materials.

** Allied equipment ordered through John Deere dealer.

Loader operating information is based on machine with all standard equipment, 20.5-25, 12 PR, L2 tires, lift hooks, 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 and/or subtract the following:

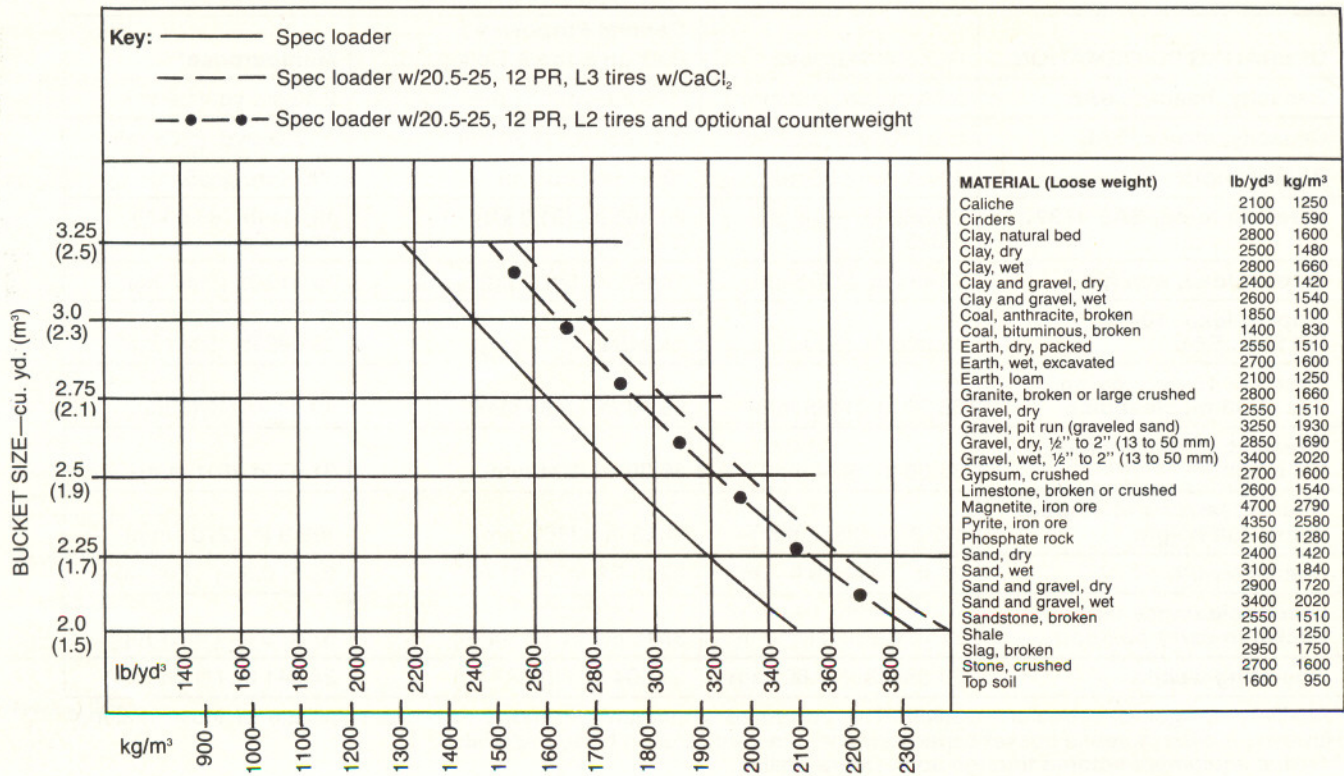
Adjustments to operating weights and tipping loads for a 2.50 cu. yd. (1.9 m³) general purpose bucket

Add (+) or deduct (-) lb. (kg) as indicated for loaders with:	Loader Operating Weight	Tipping Load Straight	Tipping Load 40° Full Turn SAE
17.5-25, 12 PR, L2 without CaCl ₂	- 794 lb. (360 kg)	- 553 lb. (251 kg)	- 478 lb. (217 kg)
17.5-25, 12 PR, L2 with CaCl ₂	+ 386 lb. (175 kg)	+ 1091 lb. (495 kg)	+ 944 lb. (428 kg)
17.5-25, 12 PR, L3 without CaCl ₂	- 661 lb. (300 kg)	- 461 lb. (209 kg)	- 399 lb. (181 kg)
17.5-25, 12 PR, L3 with CaCl ₂	+ 518 lb. (235 kg)	+ 1182 lb. (536 kg)	+ 1023 lb. (464 kg)
17.5 R25, One Star, L2 equivalent without CaCl ₂	- 414 lb. (188 kg)	- 289 lb. (131 kg)	- 249 lb. (113 kg)
17.5 R25, One Star, L2 equivalent with CaCl ₂	+ 765 lb. (347 kg)	+ 1356 lb. (615 kg)	+ 1171 lb. (531 kg)
20.5-25, 12 PR, L2 with CaCl ₂	+ 1820 lb. (826 kg)	+ 2538 lb. (1151 kg)	+ 2194 lb. (995 kg)
20.5-25, 12 PR, L3 without CaCl ₂	+ 291 lb. (132 kg)	+ 203 lb. (92 kg)	+ 176 lb. (80 kg)
20.5-25, 12 PR, L3 with CaCl ₂	+ 2112 lb. (958 kg)	+ 2740 lb. (1243 kg)	+ 2368 lb. (1074 kg)
ROPS canopy in lieu of ROPS cab	- 320 lb. (145 kg)	- 300 lb. (136 kg)	- 243 lb. (110 kg)
Bucket teeth	+ 240 lb. (109 kg)	- 298 lb. (135 kg)	- 292 lb. (132 kg)
***2nd optional counterweight	+ 935 lb. (424 kg)	+ 2081 lb. (944 kg)	+ 1709 lb. (775 kg)

***Not to be used with CaCl₂

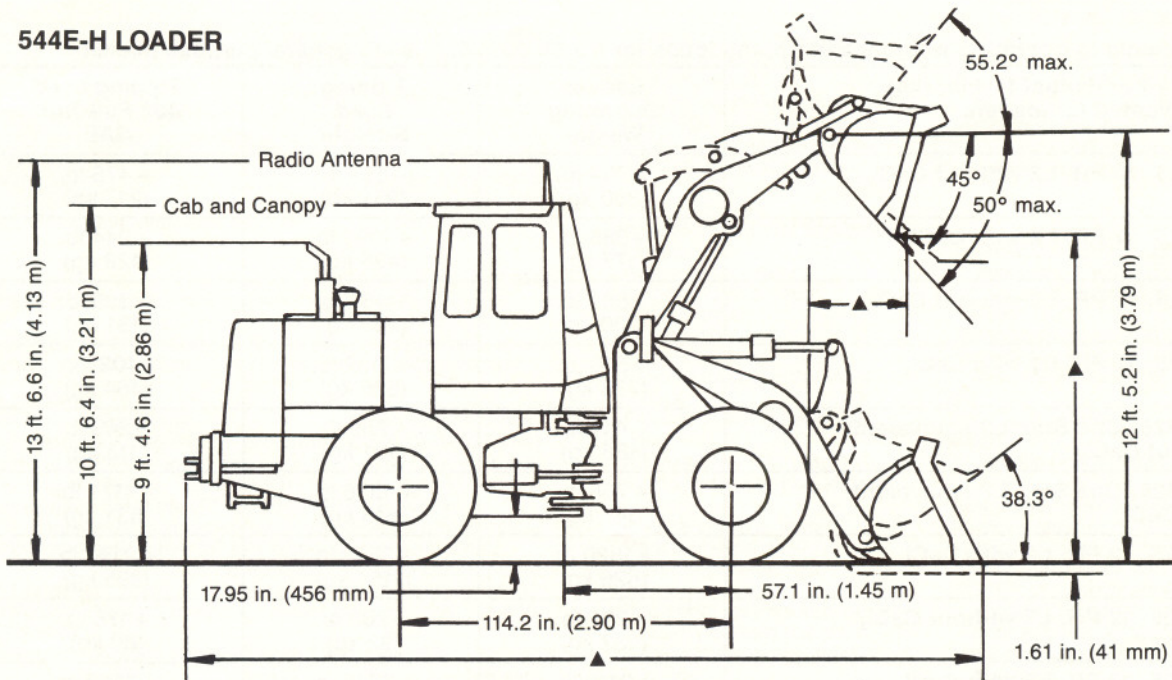
544E-H LOADER DIMENSIONS AND SPECIFICATIONS

544E-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.

544E-H LOADER



▲ SEE OPERATING INFORMATION:

TIRES

	17.5-25	20.5-25
Tread width	76.38 in. (1940 mm)	74.80 in. (1900 mm)
Width over tires	95.28 in. (2420 mm)	96.93 in. (2462 mm)
Change in vertical height	-2.66 in. (66 mm)	0

