

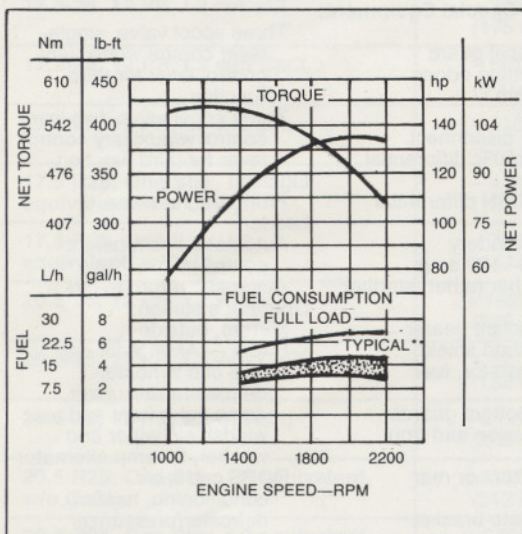


624E LOADER WITH COUPLER



Model shown may include options

ENGINE PERFORMANCE



*Depending on operating variables

FEATURES

- 135 SAE net hp (101 kW) John Deere turbocharged diesel engine
- Four-wheel drive
- Bucket capacities to 3.0 cu. yd. (2.3 m³)
- Operating weights to 30,397 lb. (13 788 kg)
- 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 w/ optional automatic return-to-dig and optional boom height control
- Optional front axle hydraulic differential lock or NoSPIN front differential
- Optional vandal protection
- Manual or optional hydraulic Quik-Tatch™ coupler
- 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:

- Forks
- Material handling arm
- Blades
- Multipurpose buckets
- Side-dump bucket
- Snow blowers
- Snow plows
- Sweepers
- Special buckets

624E LOADER WITH COUPLER 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 one rear counterweight, ROPS cab, full fuel tank and 175-lb. (80 kg) operator.

Rated Power @ 2200 engine rpm:	SAE	DIN 70 020
Net	135 hp (101 kW)	101 kW
Gross	141 hp (105 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 6414T

Type	4-stroke cycle, turbocharged diesel
Bore and stroke	4.19 x 5 cu. in. (106.5 x 127 mm)
No. of cylinders	6
Displacement	414 cu. in. (6.785 L)
Maximum net torque @ 1300 rpm	420 lb-ft (570 Nm) (58.1 kg-m)
Cooling fan	Blower
Air cleaner w/restriction indicator	Dry type
Electrical system	12 volt w/65-amp alternator
Batteries (one 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	3.12 to 1

Transmission

Countershaft, Power Shift

Forward Speeds:

	mph (max.)	km/h (max.)
1	4.8	7.8
2	8.0	12.8
3	16.0	25.8
4	25.4	40.9

Reverse Speeds:

1	4.8	7.8
2	8.0	12.8
3	16.0	25.8

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 26 degrees total (34.5 in. [876 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. 9 in. (5.11 m)	
Cylinder size: Stroke	19.3 in. (491 mm)
Bore	3.15 in. (80 mm)
Rod diameter	1.77 in. (45 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 57.0 gpm (216 L/min) at 600 psi (4137 kPa) (42.2 kg/cm²) and 2200 engine rpm. Loader function relief valve pressure setting is 2800 psi (19 306 kPa) (196.8 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 multi-purpose 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	1.7 sec.
Lowering: float	3.5 sec.
power	4.3 sec.

Maximum lift capacity with 2.63 cu. yd. (2.0 m³) excavating bucket:

Maximum height	13,060 lb. (5924 kg)
Ground level	23,909 lb. (10 845 kg)

Hydraulic Cylinders:

	Bore	Stroke
Boom, two	5.50 in. (140 mm)	28.58 in. (726 mm)
Bucket, one	6.3 in. (160 mm)	23.75 in. (603 mm)
Cylinder rods	Ground, heat-treated, chrome-nickel-plated, polished	
Boom cylinder rods	2.48 in. (63 mm) dia.	
Bucket cylinder rod	3.15 in. (80 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
 20.5 R25, One Star, L2 equivalent

Capacities:

	U.S.	Liters
Fuel tank	55 gal.	208
Cooling system	26 qt.	25
Crankcase	18 qt.	17
Crankcase, including filter	20 qt.	19
Transmission case and filters	11 qt.	10
Front differential	24 qt.	23
Rear differential	17 qt.	16
Loader hydraulic sump	108 qt.	102

Additional Standard Equipment:

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

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	
Lights:	Front and rear work
Loader:	Automatic boom height control
Additional battery	Automatic return-to-dig
Alternator—130 amp	
Cold weather (ether) starting aid	
Engine coolant heater	
Radiator sand shield	
Water separator, fuel	
Operator's station:	Mirrors, outside
Auxiliary bottom guards, transmission and front frame	Radio — AM/FM for cab
Fenders, front or rear	ROPS cab w/heater-defroster-pressurizer, dome light, front and rear windshield wiper and washer, 90-amp alternator
Lift hooks	ROPS cab w/air conditioning, heater/defroster/pressurizer dome light, front and rear windshield wiper and washer, 90-amp alternator
License plate bracket	Seats:
Rear counterweights	Adjustable deluxe suspension cloth seat w/armrests
Steps, frame mounted	Adjustable deluxe suspension cloth seat w/armrests for cab
SMV emblem	Secondary steering
Transmission side frame guards	Three-inch (76 mm) seat belt w/o retractor
Hydraulics:	
Two spool valve w/single-lever control	
Two spool valve w/two-lever control	

624E LOADER WITH COUPLER OPERATING INFORMATION — BUCKETS

OPERATING INFORMATION	GENERAL PURPOSE BUCKETS		
Capacity, heaped, SAE	2.25 cu. yd. (1.7 m ³)	2.63 cu. yd. (2.0 m ³)	3.00 cu. yd. (2.3 m ³)
Capacity, struck, SAE	1.88 cu. yd. (1.44 m ³)	2.25 cu. yd. (1.7 m ³)	2.63 cu. yd. (2.0 m ³)
Bucket width	100.4 in. (2.55 m)	101.8 in. (2.59 m)	101.8 in. (2.59 m)
Breakout force, SAE J732C	30,768 lb. (136.9 kN) (13 956 kg)	28,038 lb. (124.7 kN) (12 718 kg)	25,697 lb. (114.3 kN) (11 656 kg)
Tipping load, straight	20,915 lb. (9487 kg)	20,042 lb. (9091 kg)	19,956 lb. (9052 kg)
Tipping load, 40 deg. full turn, SAE	17,745 lb. (8049 kg)	16,960 lb. (7693 kg)	16,874 lb. (7654 kg)
Reach at 45-deg. dump, 7 ft. (2.13 m) clearance	58.23 in. (1479 mm)	58.7 in. (1491 mm)	60.0 in. (1524 mm)
Reach at 45-deg. dump full height	34.96 in. (888 mm)	37.0 in. (940 mm)	39.76 in. (1010 mm)
Dump clearance at 45-deg. dump, full height	115.9 in. (2945 mm)	112.8 in. (2864 mm)	110.0 in. (2794 mm)
Overall length	24 ft. 0.8 in. (7.34 m)	24 ft. 5.3 in. (7.45 m)	24 ft. 9.5 in. (7.56 m)
Loader clearance circle bucket in carry position	38 ft. 11.4 in. (11.87 m)	39 ft. 3.4 in. (11.97 m)	39 ft. 5.9 in. (12.04 m)
Operating weight	27,661 lb. (12 547 kg)	28,025 lb. (12 712 kg)	28,109 lb. (12 750 kg)

All information is based on machine with all standard equipment, 20.5-25, 12 PR, L2 tires with one rear counterweight, 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 2.63 cu. yd. (2.0 m³) general purpose bucket and 54-in. (1372 mm) pallet fork.

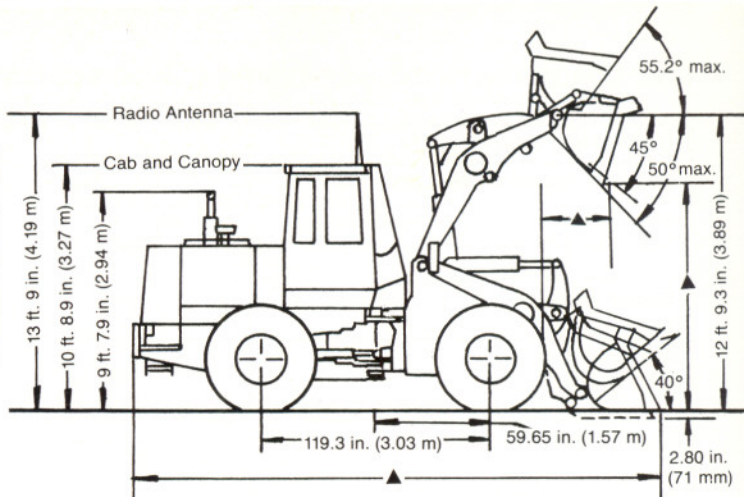
Add (+) or deduct (-) lb. (kg) as indicated for machines with:	Loader Operating Weight	Bucket		Fork*	
		Straight	Full Turn	Straight	Full Turn
17.5-25, 12 PR, L2 w/o CaCl ₂	- 794 lb. (360 kg)	- 534 lb. (242 kg)	- 461 lb. (209 kg)	- 388 lb. (176 kg)	- 340 lb. (154 kg)
17.5-25, 12 PR, L2 w/CaCl ₂	+ 386 lb. (175 kg)	+ 1054 lb. (478 kg)	+ 911 lb. (413 kg)	+ 761 lb. (345 kg)	+ 655 lb. (297 kg)
17.5-25, 12 PR, L3 w/o CaCl ₂	- 661 lb. (300 kg)	- 443 lb. (201 kg)	- 384 lb. (174 kg)	- 326 lb. (148 kg)	- 284 lb. (129 kg)
17.5-25, 12 PR, L3 w/CaCl ₂	+ 518 lb. (235 kg)	+ 1142 lb. (518 kg)	+ 988 lb. (448 kg)	+ 825 lb. (374 kg)	+ 710 lb. (322 kg)
17.5 R25, One Star, L2 equivalent, w/o CaCl ₂	- 414 lb. (188 kg)	- 278 lb. (126 kg)	- 240 lb. (109 kg)	- 205 lb. (93 kg)	- 181 lb. (82 kg)
17.5 R25, One Star, L2 equivalent, w/CaCl ₂	+ 765 lb. (347 kg)	+ 1310 lb. (594 kg)	+ 1131 lb. (513 kg)	+ 944 lb. (428 kg)	+ 814 lb. (369 kg)
20.5-25, 12 PR, L2 w/CaCl ₂	+ 1820 lb. (826 kg)	+ 2452 lb. (1112 kg)	+ 2119 lb. (961 kg)	+ 1784 lb. (809 kg)	+ 1537 lb. (697 kg)
20.5-25, 12 PR, L3 w/o CaCl ₂	+ 291 lb. (132 kg)	+ 196 lb. (89 kg)	+ 170 lb. (77 kg)	+ 143 lb. (65 kg)	+ 121 lb. (55 kg)
20.5-25, 12 PR, L3 w/CaCl ₂	+ 2112 lb. (958 kg)	+ 2646 lb. (1200 kg)	+ 2286 lb. (1037 kg)	+ 1916 lb. (869 kg)	+ 1653 lb. (750 kg)
20.5 R25, One Star, L2 equivalent, w/o CaCl ₂	+ 467 lb. (212 kg)	+ 315 lb. (143 kg)	+ 273 lb. (124 kg)	+ 229 lb. (104 kg)	+ 196 lb. (89 kg)
20.5 R25, One Star, L2 equivalent, w/CaCl ₂	+ 2288 lb. (1038 kg)	+ 2765 lb. (1254 kg)	+ 2390 lb. (1084 kg)	+ 2004 lb. (909 kg)	+ 1728 lb. (784 kg)
ROPS canopy in lieu of ROPS cab	- 320 lb. (145 kg)	- 286 lb. (130 kg)	- 264 lb. (120 kg)	- 223 lb. (101 kg)	- 210 lb. (95 kg)
Deduct one rear counterweight	- 946 lb. (429 kg)	- 2077 lb. (942 kg)	- 1702 lb. (772 kg)	- 1504 lb. (682 kg)	- 1232 lb. (559 kg)
** Add second rear counterweight	+ 935 lb. (424 kg)	+ 2008 lb. (911 kg)	+ 1649 lb. (748 kg)	+ 1453 lb. (659 kg)	+ 1193 lb. (541 kg)

* Allied equipment ordered through John Deere dealer.

** Not to be used with CaCl₂

624E LOADER WITH COUPLER DIMENSIONS

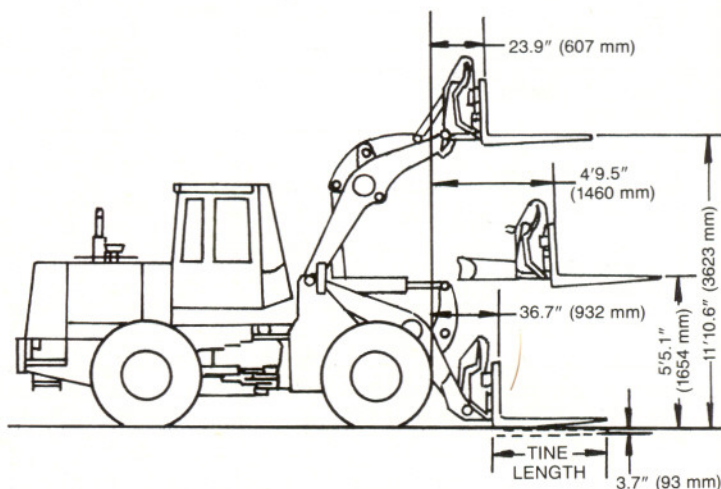
Size	TIRES	
	17.5-25	20.5-25
Tread width	78.74 in. (2000 mm)	74.80 in. (1900 mm)
Width over tires	97.99 in. (2489 mm)	96.93 in. (2462 mm)
Change in vertical height	-2.36 in. (60.0 mm)	0



▲ SEE OPERATING INFORMATION — BUCKETS

OPERATING INFORMATION — PALLET FORK*

Tine length	48 in. (1219 mm)	54 in. (1372 mm)	60 in. (1524 mm)
Ground to top of tine clearance	11 ft. 10.6 in. (3633 mm)	11 ft. 10.6 in. (3633 mm)	11 ft. 10.6 in. (3633 mm)
Max. reach with fork level	4 ft. 9.5 in. (1460 mm)	4 ft. 9.5 in. (1460 mm)	4 ft. 9.5 in. (1460 mm)
Overall length	25 ft. 9.8 in. (7870 mm)	26 ft. 3.8 in. (8022 mm)	26 ft. 9.8 in. (8175 mm)
Tipping load, straight (fork level, load centered on tine)	15,190 lb. (6890 kg)	14,760 lb. (6695 kg)	14,352 lb. (6510 kg)
Tipping load, 40-deg. full turn (fork level, load centered on tine)	12,893 lb. (5848 kg)	12,524 lb. (5681 kg)	12,174 lb. (5522 kg)
Operating weight	27,419 lb. (12 427 kg)	27,461 lb. (12 456 kg)	27,500 lb. (12 474 kg)



OPERATING INFORMATION — MATERIAL HANDLING ARM*

Boom Position	Retracted	Mid-position	Extended
Operating load	4259 lb. (1932 kg)	3344 lb. (1517 kg)	2566 lb. (1164 kg)
Tipping load, straight	10,038 lb. (4553 kg)	7886 lb. (3577 kg)	5944 lb. (2696 kg)
Tipping load, 40-deg. full turn	8516 lb. (3863 kg)	6689 lb. (3034 kg)	5132 lb. (2328 kg)
Operating weight	27,225 lb. (12 349 kg)	27,225 lb. (12 349 kg)	27,225 lb. (12 349 kg)

*Allied Equipment ordered through John Deere dealer

