ENGINE

John Deere engineered and manufactured. Replaceable wet type cylinder liners provide superior heat dissipation, longer life. High strength alloy heads have replaceable valve inserts. The forged steel, 5-main bearing crankshaft is statically and dynamically balanced for smooth operation. Cast aluminum pistons provide good heat transfer and pistons are sprayed with cooling oil for longer life.

Engine: John Deere 6059T

Rated power @ 2200 rpm	115 SAE net hp (86 kW)
	120 SAE gross hp (90 kW)
Cylinders	6
Displacement	359 cu. in. (5.884 L)
Fuel consumption, typical	2.0 to 4.0 gal/hr (7.6 to 15.2. L/h)
Maximum net torque at 1500 rpm	343 lb-ft (465 Nm)
Air cleaner	dual stage dry type with restriction indicator
Electrical system	12 volt with 65-amp alternator
Battery (one 12 volt)	
25 amps at 80°F (27°C)	reserve capacity 160 min.
BCI group 27 cold cranking capacity at 0°F (−18°C)	625 amps

TRANSMISSION

A full power shift torque-converter-type transmission provides four speeds forward and three reverse speeds. A single-stage, single phase torque converter and countershaft style power shift transmission are paired for smooth and modulated shifts.

TRAVEL SPEEDS

	Forward		Reverse	
Gear	**mph**	**(km/h)**	**mph**	**(km/h)**
1	4.5	7.3	4.5	7.3
2	7.6	12.2	7.6	12.2
3	17.2	27.7	17.2	27.7
4	24.6	39.5		

FINAL DRIVES

Large, heavy-duty, planetary final drive gears are mounted inboard where size is not restricted by wheel diameter. They distribute axle shock loads evenly over three gears and run in a cooling oil bath for long life and trouble-free service.

DIFFERENTIALS

Conventional front and rear differentials are standard. John Deere's exclusive hydraulic differential lock is the superior traction alternative. It can be ordered on the front, with a conventional differential in the rear. Or you can order the hydraulic lock front and rear. In either case the operator is in complete control, engaging and disengaging the differential lock as needed. When engaged the affected wheels are 100 percent locked up; turning at the same speed, giving maximum traction for faster loading, pulling you through slippery spots. Differentials available:

Conventional front and rear	standard
Hydraulic lock front, conventional rear	optional
NoSPIN front, conventional rear	optional
Hydraulic lock front and rear	optional
Front axle disconnect	optional

BRAKES

Hydraulic actuated, wet disk brakes are mounted inboard. They are bathed in cooling oil for long life, self-adjusting, self-equalizing, and require no periodic service. The foot-operated parking brake is an expanding shoe attached to the transmission output shaft. An optional front axle disconnect is available for loaders that might be driven long distances.

STEERING

The steering system in the 544E provides low effort, smooth control at any engine rpm. High torque steering cylinder geometry and large cylinders permit full power steering at all speeds through the 80 degree steering arc (40 degrees each direction).

Turning radius (measured to centerline of outside tire)	16 ft. 3 in. (4.95 m)
Rear axle oscillation	22 degrees, stop to stop
Vertical travel at center of tire	28.6 in. (727 mm)

HYDRAULICS

Loader functions and steering:
A gear pump delivers 46.3 gpm (175 L/min) at 600 psi (4137 kPa) and 2200 engine rpm. The loader function relief valve pressure setting is 2750 psi (18 961 kPa). The maximum steering pressure is 2600 psi (17 927 kPa).

Controls:
Dual hydraulic valves with one or two levers. An optional triple valve is available for forks and attachments.

Brakes and pilot system:
The axial-piston pump delivers 8.1 gpm (31 L/min) at 600 psi (4137 kPa) and 2200 engine rpm. Maximum system pressure is 2300 psi (15 859 kPa).

Loader operating cycle times at full throttle with rated load in the bucket:

Raise	5.8 sec.
Dump	1.4 sec.
Lower	3.2 sec. (float)
	3.9 sec. (power)

Maximum lift capacity with 2.25 cu. yd. (1.7 m³) excavating bucket:

Maximum height	11,686 lb. (5302 kg)
Ground level	23,708 lb. (10 757 kg)

TIRES

Choice of:

15.5-25, 12 PR L2	17.5-25, Radial, One Star L2 equivalent
17.5-25, 12 PR L2	17.5-25, Radial, One Star L3 equivalent
17.5-25, 12 PR L3	20.5-25, Radial, One Star L2 equivalent
20.5-25, 12 PR L3	20.5-25, Radial, One Star L3 equivalent

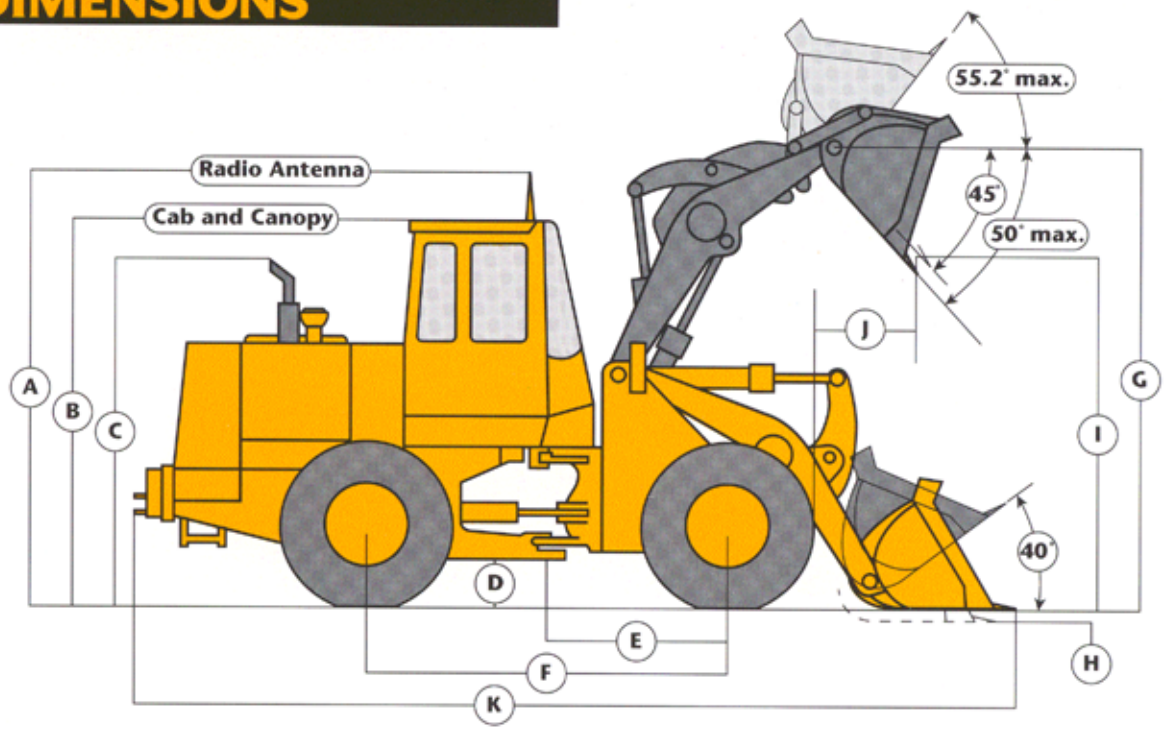
CAPACITIES

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

OPERATING WEIGHT

See 544E Loader Operating Information and various charts.

DIMENSIONS

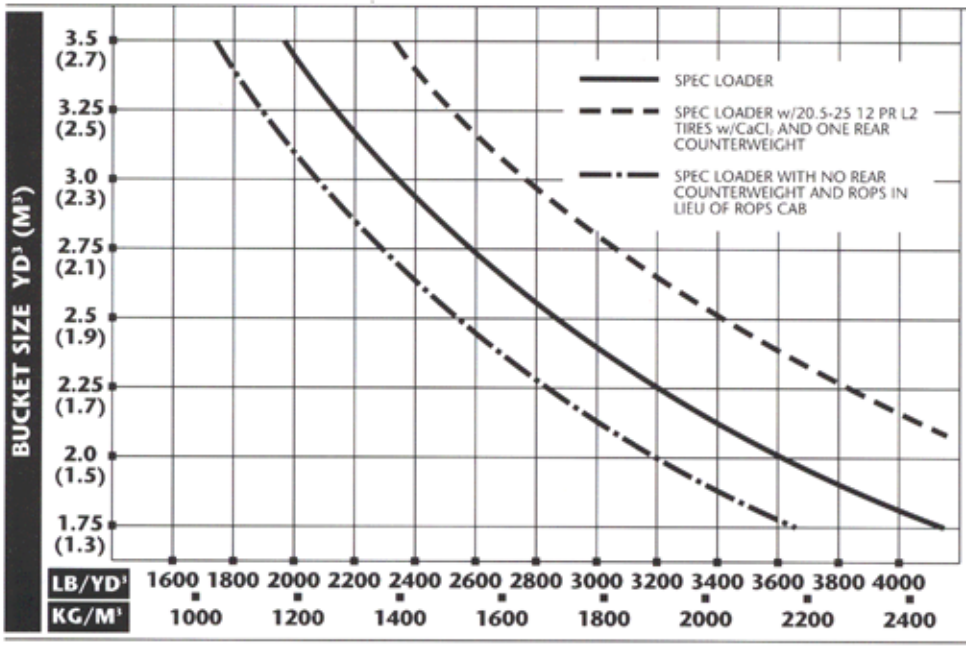


Key:

A	Overall height	13 ft. 4 in. (4.07 m)
B	Height to top of cab and canopy	10 ft. 3.8 in. (3.14 m)
C	Height to top of exhaust	9 ft. 2 in. (2.79 m)
D	Ground clearance	15 in. (390 mm)
E	Length from centerline to front axle	57 in. (1450 mm)
F	Wheelbase	114 in. (2896 mm)
G	Height to hinge pin – fully raised	12 ft. 2.6 in. (3.72 m)
H	Digging depth	4 in. (101 mm)
I	Dump height	See Operating Information
J	Reach bucket fully raised	See Operating Information
K	Overall length	See Operating Information

TIRES	**15.5-25**	**17.5-25**	**20.5-25**
Tread width	76.38 in. (1940 mm)	76.38 in. (1940 mm)	74.80 in. (1900 mm)
Width over tires	93.11 in. (2365 mm)	95.28 in. (2420 mm)	96.93 in. (2462 mm)
Change in vertical height	– 1.57 in. (40 mm)	0	+ 2.60 in. (66 mm)

BUCKET SELECTION GUIDE*



MATERIAL (Loose weight)	lb/yd³	kg/m³
Caliche	2100	1250
Cinders	1000	590
Clay, natural bed	2800	1600
Clay, dry	2500	1480
Clay, wet	2800	1660
Clay and gravel, dry	2400	1420
Clay and gravel, wet	2600	1540
Coal, anthracite, broken	1850	1100
Coal, bituminous, broken	1400	830
Earth, dry, packed	2550	1510
Earth, wet, excavated	2700	1600
Earth, loam	2100	1250
Granite, broken or large crushed	2800	1660
Gravel, dry	2550	1510
Gravel, pit run (graveled sand)	3250	1930
Gravel, dry 1/2" to 2" (13 to 50 mm)	2850	1690
Gravel, wet 1/2" to 2"(13 to 50 mm)	3400	2020
Gypsum, crushed	2700	1600
Limestone, broken or crushed	2600	1540
Magnetite, iron ore	4700	2790
Pyrite, iron ore	4350	2580
Phosphate rock	2160	1280
Sand, dry	2400	1420
Sand, wet	3100	1840
Sand and gravel, dry	2900	1720
Sand and gravel, wet	3400	2020
Sandstone, broken	2550	1510
Shale	2100	1250
Slag, broken	2950	1750
Stone, crushed	2700	1600
Topsoil	1600	950

*This guide, representing bucket sizes not necessarily manufactured by Deere, will help in selecting the proper bucket size for material density and loader configuration. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment.

544E LOADER OPERATING INFORMATION

OPERATING INFORMATION	Bucket Type/Size	Excavating	Excav. w/ Bolt-on Edge	Excav. w/Aux. Spillguard*	Excav. w/Edge + Spillguard*	Stockpiling	Stockpile. w/ Bolt-On Edge	Stockpile. w/ Aux. Spillguard*	Stockpile. w/Edge +Spillguard*	Multi-purpose**
Capacity, heaped SAE	cu. yd. m^3	2.25 1.7	2.38 1.8	2.5 1.9	2.63 2.0	2.50 1.9	2.63 2.0	2.75 2.1	2.88 2.2	2.13 1.6
Capacity, struck, SAE	cu. yd. m^3	1.88 1.44	1.99 1.52	2.16 1.65	2.26 1.73	2.12 1.62	2.25 1.70	2.41 1.84	2.51 1.92	1.77 1.35
Bucket width	in. m	100.4 2.55	100.4 2.55	100.4 2.55	100.4 2.55	100.4 2.55	100.4 2.55	100.4 2.55	100.4 2.55	100.4 2.55
Breakout force, SAE J732C	lb. kN	22,610 100.6	20,831 92.6	22,524 100.2	20,745 92.3	20,972 93.3	19,386 86.2	20,884 92.9	19,298 85.8	22,491 100.0
Tipping load, straight	lb. kg	17,112 7762	16,546 7505	17,068 7742	16,300 7393	16,920 7675	16,385 7432	16,868 7651	16,302 7393	14,872 6746
Tipping load, 40-deg. full turn, SAE	lb. kg	14,689 6663	14,151 6419	14,641 6641	13,920 6314	14,515 6584	14,008 6354	14,460 6559	13,922 6314	12,646 5736
Reach, 45 deg. dump, 7 ft. (2.13 m) clearance	in. mm	57.05 1449	57.2 1453	57.05 1449	57.2 1453	58.03 1474	58.15 1477	58.03 1474	58.15 1477	52.48 1333
Reach, 45 deg. dump, full height	in. mm	37.20 945	38.62 981	37.20 945	38.62 981	39.2 996	40.63 1032	39.2 996	40.63 1032	33.58 853
Dump clearance, 45 deg., full height	in. mm	111.7 2838	109.21 2774	111.7 2838	109.21 2774	109.7 2787	107.2 2723	109.7 2787	107.2 2723	109.8 2789
Overall length	ft.-in. m	22-7.2 6.89	22-10.1 6.96	22-7.2 6.89	22-10.7 6.98	22-10.2 6.97	23-1.8 7.06	22-10.2 6.97	23-1.8 7.06	22-6.8 6.88
Loader clearance circle, bucket in carry position	ft.-in. m	37-5 11.44	27-7.4 11.47	37-5 11.44	37-7.4 11.47	37-7 11.46	37-9 11.51	37-7 11.46	37-9 11.51	37-5.2 11.41
Operating weight	lb. kg	22,589 10 246	22,952 10 411	22,708 10 300	23,144 10 498	22, 661 10 279	23,025 10 444	22,780 10 333	23,071 10 465	23,618 10 713

*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 17.5-25, 12 PR L2 tires, one rear counterweight, ROPS cab, full fuel tank, 175-lb. (79 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 load for 2.25 cu. yd. (1.7 m^3) excavating bucket.

ADJUSTMENTS TO OPERATING WEIGHTS

Add (+) or deduct (−) lb. (kg) as indicated for loaders with:		Operating Weight	Tipping Load Straight	Tipping Load 40 Deg. Full Turn, SAE
15.5-25, 12 PR L2 tires w/o $CaCl_2$	lb. kg	−247 112	−172 78	−150 68
15.5-25, 12 PR L2 tires w/$CaCl_2$	lb. kg	+745 338	+1182 536	+1021 463
15.5 R25, L2 equivalent tires w/o $CaCl_2$	lb. kg	+97 44	+68 31	+57 26
15.5 R25, One Star, L2 equivalent tires w/$CaCl_2$	lb. kg	+1036 470	+1387 629	+1197 543
17.5-25, 12 PR L2 tires w/$CaCl_2$	lb. kg	+1180 535	+1656 751	+1429 648
17.5-25, 12 PR L3 tires w/o $CaCl_2$	lb. kg	+132 60	+93 42	+79 36
17.5-25, 12 PR L3 tires w/$CaCl_2$	lb. kg	+1312 595	+1748 793	+1510 685
17.5 R25, One Star L2 equivalent tires w/o $CaCl_2$	lb. kg	+379 172	+267 121	+229 104
17.5 R25, One Star L2 equivalent tires w/$CaCl_2$	lb. kg	+1559 707	+1922 872	+1660 753
20.5-25,12 PR L2 tires w/o $CaCl_2$	lb. kg	+794 360	+558 253	+481 218
20.5, 12 PR L2 tires w/$CaCl_2$	lb. kg	+2615 1186	+3112 1412	+2687 1219
ROPS canopy in lieu of ROPS cab	lb. kg	−320 145	−304 138	−208 127
Bucket teeth	lb. kg	+240 109	−278 126	−271 123
Deduct one rear counterweight	lb. kg	−790 358	−1742 792	−1435 651
*Add second rear counterweight	lb. kg	+935 424	+2094 950	+1722 781

*Not to be used with $CaCl_2$