

ENGINE

John Deere engineered and manufactured. Replaceable wet type cylinder liners provide superior heat dissipation, longer life. High strength alloy head has replaceable valve seat inserts. The forged steel, 7-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 Turbocharged
 Rated power at 2,200 rpm.....115 SAE net hp (86 kW)
120 SAE gross hp (90 kW)
 Cylinders6
 Displacement359 cu. in. (5.884 L)
 Fuel consumption, typical2.0 to 3.3 gal./hr. (7.6 to 12.5 L/h)
 Torque rise25 percent
 Maximum net torque343 lb.-ft. (465 Nm)
 Lubricationpressure system w/full-flow filter and cooler
 Air cleanerdual stage dry type with safety element and precleaner
 Electrical system12 volt with 95-amp alternator
 Sucker-type cooling fan

TRANSMISSION

John Deere designed and built power shift transmission with modulated full power shifting between forward and reverse. Uses single stage, dual phase 12.2-in. (310 mm) torque converter with 1:99:1 stall ratio.

TRAVEL SPEEDS

	Gear	Forward		Reverse	
		mph	(km/h)	mph	(km/h)
With standard	1	3.1	5.0	3.4	5.4
21L-24 rear and	2	5.4	8.7	6.0	9.6
14.5/75-16.1	3	11.1	17.9		
front tires	4	19.0	30.6		
With MFWD and	1	3.4	5.5	3.7	6.0
required 21L-28	2	6.0	9.6	6.6	10.6
rear and 15-19.5	3	12.3	19.8		
front tires	4	21.0	33.9		

FINAL DRIVES

Heavy-duty, inboard mounted planetary type. Evenly distribute axle shock loads over three gears that run in a cooling oil bath.

BRAKES

Hydraulic wet disk service brakes are mounted inboard and are pressure cooled and lubricated. They're self-adjusting and self-equalizing. Individual pedals can be applied together or separately. **Parking/emergency caliper disk brake** is an independent system that is spring-applied, hydraulically released, and controlled by an electric switch on the control console. Automatically neutralizes reverser when parking brake is applied. All brakes conform to SAE J1473.

CAPACITIES

	U.S.
Fuel tank	44 gal. (166 L)
Engine coolant	28 qt. (26 L)
Engine oil including filter	20 qt. (19 L)
Transmission system	6 gal. (23 L)
Hydraulic system	40 gal. (151 L)
Rear axle	18 qt. (17 L)

STEERING

Hydrostatic power steering gives superior control at all speeds. Excellent steering torque allows easy maneuvering with heavy loads. Power steering conforms to SAE J1151 and emergency steering SAE J53.

Non-powered axle
 Curb turning radius with brakes14 ft. 4 in. (4.37 m)
 without brakes15 ft. 2 in. (4.63 m)
 Bucket clearance circle with brakes36 ft. 2 in. (11.02 m)
 without brakes37 ft. 10 in. (11.54 m)
 Axle oscillation stop to stop20 degrees
 Mechanical-front-wheel drive
 Curb turning radius with brakes14 ft. 5 in. (4.39 m)
 without brakes15 ft. 7 in. (4.76 m)
 Bucket clearance circle with brakes36 ft. 3 in. (11.06 m)
 without brakes38 ft. 9 in. (11.80 m)
 Axle oscillation stop to stop18 degrees
 Steering wheel turns stop to stop, both axles3.0 to 3.8

Axle ratings:	Static	Dynamic	SAE J43
Front	78,700 lb. (35 700 kg)	78,700 lb. (35 700 kg)	30,460 lb. (13 800 kg)
Rear	74,000 lb. (33 600 kg)	98,800 lb. (44 900 kg)	23,700 lb. (10 700 kg)

HYDRAULICS

Systemclosed center
 Pressure, main relief2,550 psi (17 500 kPa)
 Pumpradial pistons
 Flow at 2,200 rpm53 gpm (201 L/min.)
 Filter, return oil10-micron, spin-on replaceable element

CYLINDERS

	Bore		Stroke		Rod	
	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)
Loader boom (2)	3.84 100	34.25 870	2.20 56			
Loader bucket (1)	4.53 115	32.32 821	2.20 56			
Backhoe boom (1)	6.30 160	44.37 1127	3.15 80			
Backhoe crowd (1)	5.51 140	35.35 898	2.76 70			
Backhoe bucket (1)	3.94 100	37.46 952	2.48 63			
Backhoe swing (2)	4.53 115	9.88 251	2.20 56			
Backhoe extendable dipperstick (1)	3.00 76	60.00 1525	1.50 38			
Backhoe stabilizer (2)	4.53 115	21.34 542	2.48 63			
Steering (1) regular axle	2.76 70	9.06 230	1.26 32			

TIRES

Rear	Front
21L-24, 16 PR R4	14.5/75-16.1, 10 PR F3
21L-28, 14 PR R4	14.5/75-16.1, 10 PR F3
21L-28, 14 PR R4	16.5L-16.1, 10 PR L1
With mechanical-front-wheel drive	
21L-28, 14 PR R4	15-19.5, 8 PR, Sure Grip
20.5-25, 12 PR L2	15-19.5, 8 PR, Sure Grip

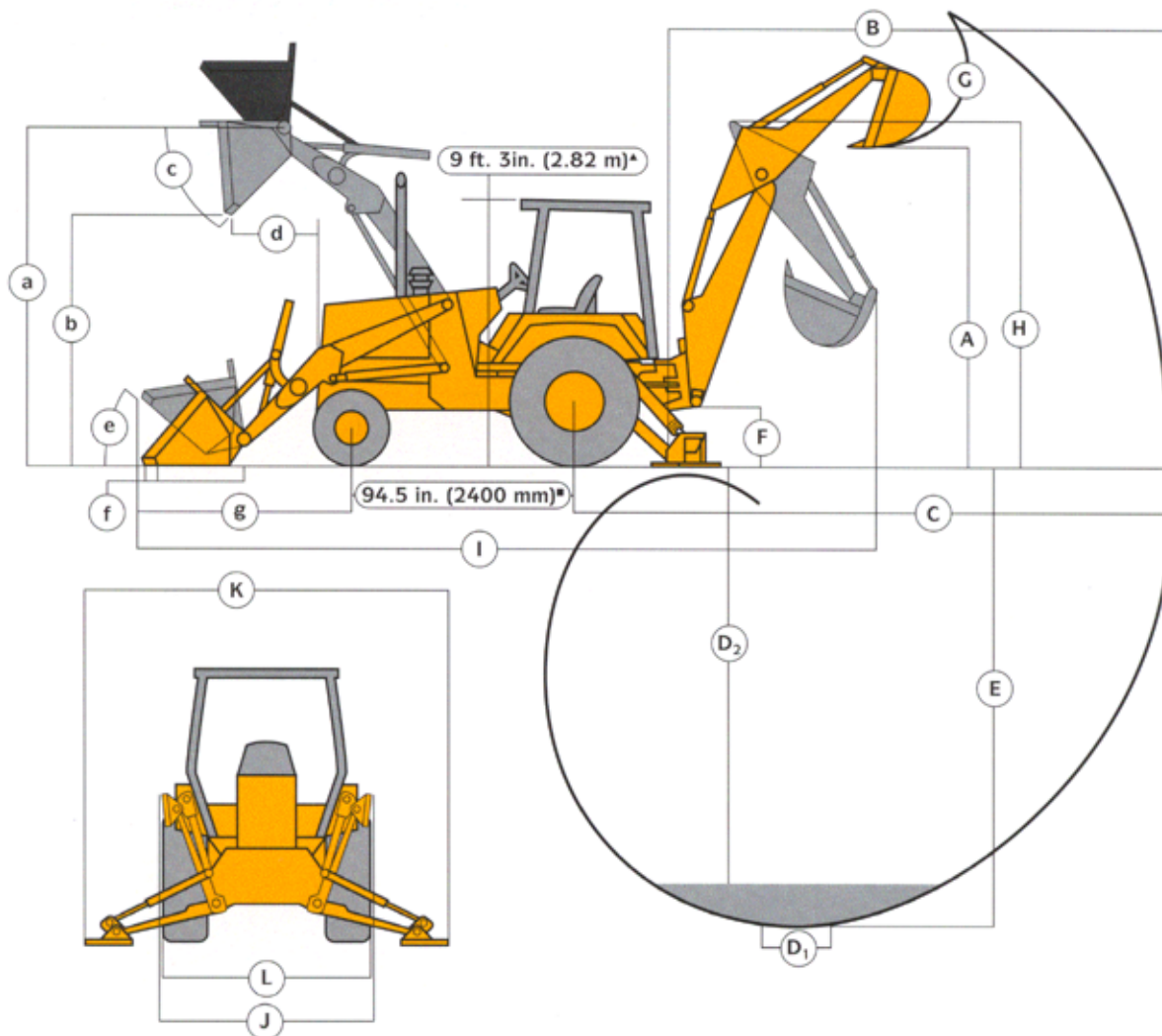
OPERATING WEIGHTS

SAE
 710D23,000 lb. (10 450 kg)
 cab adds560 lb. (254 kg)
 mechanical-front-wheel drive (less tires) adds240 lb. (109 kg)
 extendable dipperstick with required
 counterweight adds856 lb. (390 kg)
 optional front counterweighting adds700 lb. (318 kg)
 reversible stabilizer pads add90 lb. (41 kg)
 See backhoe and loader performance data for bucket weights

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on a unit with 21L-24, 16 PR R4 rear tires, 14.5/75-16.1, 10 PR F3 front tires, 1.62 cu. yd. (1.24 m³) loader bucket, 24-in. x 11.1 cu. ft. (610 mm x 0.31 m³) backhoe bucket.

DIMENSIONS

See Loader Performance (a-g)



- ▲ ROPS and Cab
- MFWD 96.5 in. (2450 mm)

Key:

	Backhoe*
A. Loading height, truck loading position	13 ft. 3 in. (4.03 m)
B. Reach from center of swing mast.....	22 ft. 8 in. (6.90 m)
C. Reach from center of rear axle	26 ft. 9 in. (8.15 m)
D. Digging depth (SAE):	
(1) 2-ft. (610 mm) flat bottom	18 ft. 2 in. (5.53 m)
(2) 8-ft. (2440 mm) flat bottom	17 ft. 3 in. (5.26 m)
E. Maximum digging depth.....	18 ft. 2 in. (5.55 m)
F. Ground clearance, minimum.....	14 in. (356 mm)
G. Bucket rotation	162 deg./152 deg.
H. Transport height.....	13 ft. 10 in. (4.21 m)
I. Overall length, transport.....	26 ft. 7.9 in. (8.13 m)
J. Stabilizer width – transport.....	8 ft. (2.44 m)
K. Stabilizer spread – operating.....	11 ft. 5 in. (3.48 m)
L. Overall width (less loader bucket)	90.5 in. (2.29 m)

*See backhoe performance

Extendable Dipperstick

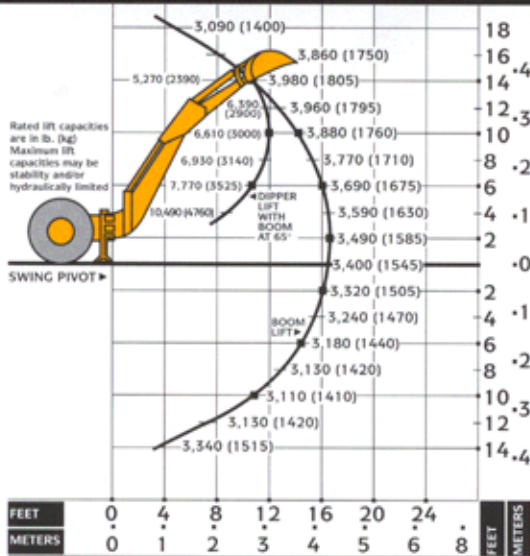
	Retracted	Extended
A. Loading height, truck loading position	13 ft. 1 in. (3.98 m)	15 ft. 3 in. (4.65 m)
B. Reach from center of swing mast.....	22 ft. 8 in. (6.90 m)	27 ft. 3 in. (8.31 m)
C. Reach from center of rear axle	26 ft. 9 in. (8.15 m)	31 ft. 4 in. (9.56 m)
D. Digging depth (SAE):		
(1) 2-ft. (610 mm) flat bottom	18 ft. 1 in. (5.51 m)	23 ft. 1 in. (7.03 m)
(2) 8-ft. (2440 mm) flat bottom	17 ft. 2 in. (5.24 m)	22 ft. 4 in. (6.82 m)
E. Maximum digging depth.....	18 ft. 1 in. (5.52 m)	23 ft. 1 in. (7.04 m)
F. Ground clearance, minimum.....	14 in. (356 mm)	14 in. (356 mm)
G. Bucket rotation	162 deg./152 deg.	162 deg./152 deg.
H. Transport height.....	13 ft. 11 in. (4.31 m)	13 ft. 11 in. (4.31 m)
I. Overall length, transport.....	26 ft. 7.9 in. (8.13 m)	26 ft. 7.9 in. (8.13 m)
J. Stabilizer width – transport.....	8 ft. (2.44 m)	8 ft. (2.44 m)
K. Stabilizer spread – operating.....	11 ft. 5 in. (3.48 m)	11 ft. 5 in. (3.48 m)
L. Overall width (less loader bucket)	90.5 in. (2.29 m)	90.5 in. (2.29 m)

BACKHOE PERFORMANCE

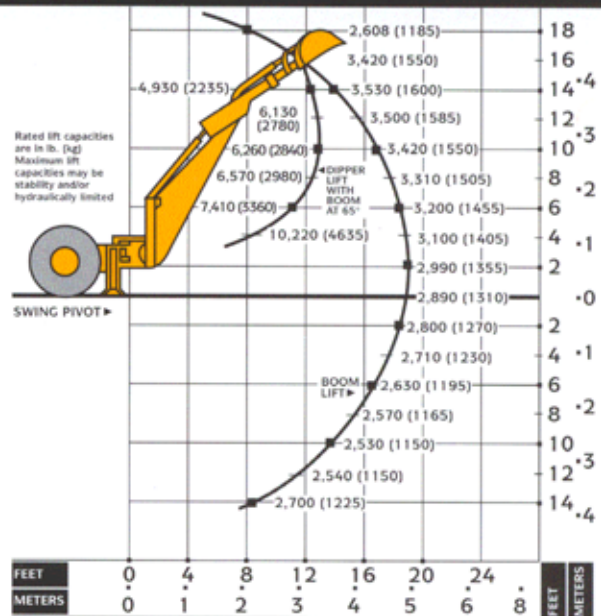
Digging force, bucket cylinder (power dig position).....	12,940 lb. (57.5 kN)	12,940 lb. (57.5 kN)
Digging force, crowd cylinder	9,600 lb. (42.7 kN)	6,700 lb. (29.8 kN)
Swing arc	180 deg.	180 deg.
Operator control.....	Two levers	Right foot treadle
Bucket positions	-2 to -14 deg. rollback	-2 to -14 deg. rollback
Stabilizer angle rearward	13 deg.	13 deg.
Lifting capacity, maximum	10,300 lb. (4679 kg)	6,800 lb. (3090 kg)
Leveling angle.....	13 deg.	13 deg.

*Backhoe specifications are with 24-in. x 11.1 cu. ft. (610 mm x 0.31 m³) bucket.

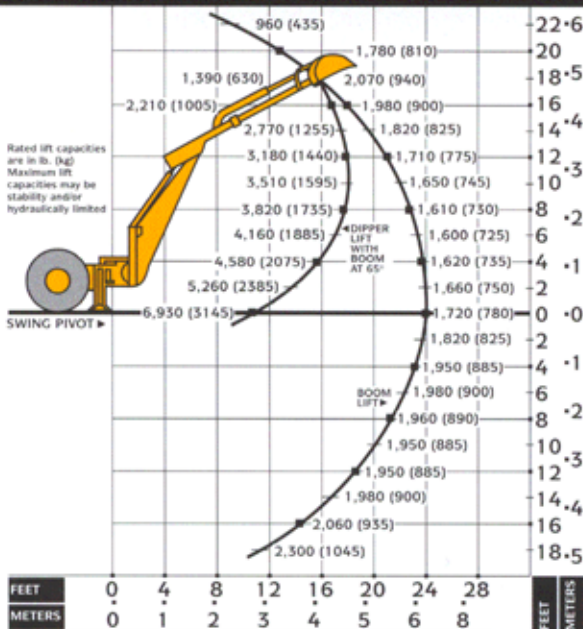
LIFT CAPACITY Backhoe with standard dipperstick. Based on SAE J31.



LIFT CAPACITY Backhoe with extendable dipperstick, retracted. Based on SAE J31.



LIFT CAPACITY Backhoe with extendable dipperstick, extended. Based on SAE J31.



BACKHOE BUCKETS

	Width in. (mm)	Capacity cu. ft. (m ³)	Weight lb. (kg)
Heavy duty with lift eye	18 (457)	7.7 (0.22)	532 (241)
	24 (610)	11.1 (0.31)	592 (268)
	30 (762)	15.0 (0.42)	642 (291)
	36 (914)	18.8 (0.53)	700 (317)
Severe duty with lift eye	18 (457)	7.9 (0.22)	640 (290)
	24 (610)	10.9 (0.31)	725 (330)
	30 (762)	14.0 (0.40)	820 (373)
	36 (914)	17.1 (0.48)	910 (414)
Ditch cleaning	48 (1231)	18.0 (0.51)	640 (290)

LOADER BUCKETS

Loader:	Width in. (mm)	Heaped Capacity cu. yd. (m ³)	Weight lb. (kg)
	92 (2340)	1.62 (1.24)	960 (435)
	96 (2440)	1.87 (1.34)	1,500 (680)
Multipurpose	96 (2440)	1.375 (1.0)	1,780 (807)

LOADER PERFORMANCE

w/1.62 cu. yd.
(1.24 m³)
Bucket

Operator control.....	single lever
Breakout force.....	14,050 lb. (62.5 kN)
Lifting capacity, full height.....	7,733 lb. (3503 kg)
a) Height to bucket hinge pin, max.	11 ft. 8 in. (3.57 m)
b) Dump clearance, bucket at 40 degrees	9 ft. 6 in. (2.88 m)
c) Bucket dump angle, max.	40 deg.
d) Reach at full height, bucket at 40 degrees.....	33.5 in. (.85 m)
e) Rollback at ground level	40 deg.
f) Digging depth below ground, bucket level	5.8 in. (147 mm)
g) Distance from front axle centerline to bucket cutting edge.....	80.5 in. (2044 mm)
Raising time to full height.....	4.3 sec.
Bucket dump time.....	1.3 sec.
Bucket lowering time	3.2 sec.

w/1.87 cu. yd.
(1.34 m³) Bucket
and MFWD

single lever	13,100 lb. (58.4 kN)
	7,257 lb. (3287 kg)
	11 ft. 10 in. (3.61 m)
	9 ft. 5 in. (2.87 m)
	40 deg.
	36.8 in. (.93 m)
	40 deg.
	4 in. (101 mm)
	82.6 in. (2098 mm)
	4.3 sec.
	1.3 sec.
	3.2 sec.

w/1.375 yd. 96 in.
Multipurpose
Bucket and MFWD

	13,500 lb. (60.1 kN)
	7,295 lb. (3305 kg)
	11 ft. 10 in. (3.61 m)
	9 ft. 5 in. (2.87 m)
	40 deg.
	32.9 in. (.84 m)
	40 deg.
	6 in. (152 mm)
	81.2 in. (2063 mm)
	4.3 sec.
	1.3 sec.
	3.2 sec.