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, 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 4039D – Naturally Aspirated
Rated power at 2,200 rpm.....70 SAE net hp (52.2 kW)
.....74 SAE gross hp (55.8 kW)
John Deere 4039T with optional
turbocharger.....75 SAE net hp (56 kW)
.....79 SAE gross hp (59 kW)
Cylinders 4
Displacement .....239 cu. in. (3.917 L)
Fuel consumption, typical.....1.0 to 2.0 gal./hr. (3.8 to 7.6 L/h)
Torque rise.....20 percent
with optional turbocharger .....25 percent
Maximum net torque .....192 lb.-ft. (260 Nm)
with optional turbocharger.....215 lb.-ft. (292 Nm)
Lubrication .....pressure system w/spin-on filter and cooler
Air cleaner .....dual stage dry type with safety element and precleaner
Electrical system .....12 volt with 95-amp alternator
Sucker-type cooling fan

TRANSMISSION

John Deere designed and built 4-speed helical gear, synchronized in all four gears, collar shift transmission with hydraulic reverser. Uses single stage, dual phase, 11-inch (280 mm) torque converter with 2.83:1 stall ratio.

TRAVEL SPEEDS

		Forward		Reverse	
	Gear	mph	(km/h)	mph	(km/h)
With 19.5L-24 rear tires	1	3.4	5.5	3.1	5.0
	2	5.9	9.5	5.3	8.5
	3	12.6	20.3	11.3	18.2
	4	20.8	33.5	18.8	30.3

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 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. A mechanical V-groove band applies pressure on differential ring gear. All brakes conform to SAE J1473.

CAPACITIES

	U.S.
Fuel tank (with ground level fueling)	34 gal. (129 L)
Engine coolant	17 qt. (16 L)
Engine oil including filter	9 qt. (8.5 L)
Torque converter and reverser system	8 qt. (7 L)
Hydraulic system	21 gal. (79 L)
Transaxle with MFWD	6 gal. (23 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 brakes.....11 ft. 9 in. (3.57 m)
without brakes.....13 ft. 3 in. (4.04 m)
Bucket clearance circle with brakes .....31 ft. 6 in. (9.61 m)
without brakes .....34 ft. 7 in. (10.55 m)
Steering wheel turns, stop to stop.....2.2 to 2.9
Mechanical-front-wheel drive
Curb turning radius with brakes.....10 ft. 11 in. (3.34 m)
without brakes .....13 ft. 8 in. (4.17 m)
Bucket clearance circle with brakes .....29 ft. 9 in. (9.07 m)
without brakes .....35 ft. 3 in. (10.74 m)
Steering wheel turns, stop to stop.....2.5
Axle oscillations stop to stop, both axles.....22 degrees

Axle ratings:	Static	Dynamic	SAE J43
Front	56,000 lb. (25 300 kg)	56,000 lb. (25 300 kg)	18,800 lb. (8500 kg)
Rear	43,500 lb. (19 700 kg)	58,000 lb. (26 300 kg)	15,260 lb. (6900 kg)

HYDRAULICS

System .....open center
Pressure, main relief .....2,700 psi (18 620 kPa)
Pump .....gear type
Flow at 2,200 rpm.....38 gpm (144 L/min.)
Filter, return oil .....10-micron, spin-on enclosed replaceable element

CYLINDERS

	Bore		Stroke		Rod	
	in.	(mm)	in.	(mm)	in.	(mm)
Loader boom (2)	3.15	80	29.80	757	1.77	45
Loader bucket (1)	3.54	90	28.19	718	1.77	45
Backhoe boom (1)	4.53	115	38.54	979	2.20	56
Backhoe crowd (1)	3.94	100	32.24	819	2.20	56
Backhoe bucket (1)	3.54	90	31.00	788	1.97	50
Backhoe swing (2)	3.94	100	10.94	278	1.97	50
Backhoe extendable dipperstick (1)	2.50	64	48.00	1220	1.25	32
Backhoe stabilizer (2)	3.94	100	19.96	507	1.97	50
Steering (1) non-powered axle	1.97	50	9.49	241	0.98	25
Steering (1) MFWD	2.36	60	7.90	202	0.98	25

TIRES

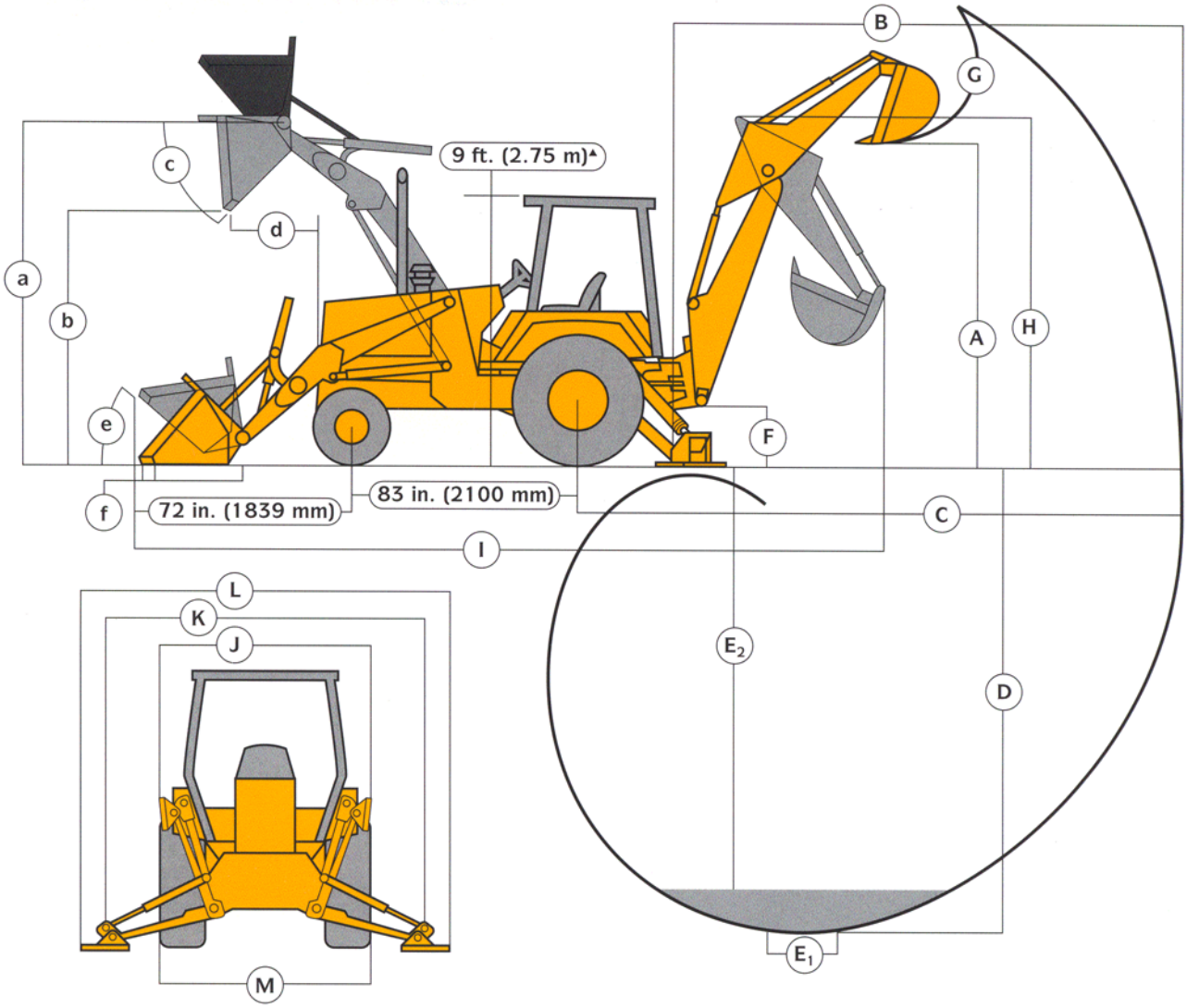
Rear	Front
16.9-24, 8 PR R4	11L-15, 8 PR F3
19.5L-24, 8 PR R4	11L-16, 12 PR F3
With mechanical-front-wheel drive	
19.5L-24, 8 PR R4	12-16.5, 8 PR
21L-24, 10 PR R4	14-17.5, 10 PR, NHS

OPERATING WEIGHTS

SAE
310D .....13,600 lb. (6169 kg)
cab adds.....500 lb. (227 kg)
mechanical-front-wheel drive with tires adds.....190 lb. (86 kg)
extendable dipperstick excluding required counterweight adds .....430 lb. (195 kg)
optional 400-lb. counterweight adds.....400 lb. (181 kg)
optional 750-lb. counterweight adds.....750 lb. (340 kg)
backhoe bucket coupler adds .....200 lb. (91 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 19.5L-24, 8 PR R4 rear tires, 11L-16, 12 PR F3 front tires, 1.12 cu. yd. (0.86 m^3) loader bucket with auxiliary cutting edge and skid plates, 24-in. x 7.5-cu. ft. (610 mm x 0.21 m^3) backhoe bucket.

DIMENSIONS



▲ ROPS and cab

Key:	Backhoe*	Extendable Dipperstick Retracted	Extendable Dipperstick Extended
A. Loading height, truck loading position	11 ft. 4 in. (3.45 m)	11 ft. 8 in. (3.55 m)	13 ft. 11 in. (4.24 m)
B. Reach from center of swing mast	17 ft. 7 in. (5.36 m)	17 ft. 7 in. (5.36 m)	21 ft. 3 in. (6.47 m)
C. Reach from center of rear axle	21 ft. (6.40 m)	21 ft. (6.40 m)	24 ft. 7 in. (7.50 m)
D. Maximum digging depth	14 ft. 6 in. (4.42 m)	14 ft. 6 in. (4.42 m)	18 ft. 3 in. (5.56 m)
E. Digging depth (SAE):			
(1) 2-ft. (610 mm) flat bottom	14 ft. 4 in. (4.37 m)	14 ft. 4 in. (4.37 m)	18 ft. 2 in. (5.53 m)
(2) 8-ft. (2440 mm) flat bottom	13 ft. 2 in. (4.02 m)	13 ft. 2 in. (4.02 m)	17 ft. 4 in. (5.28 m)
F. Ground clearance, minimum	13 in. (330 mm)	13 in. (330 mm)	13 in. (330 mm)
G. Bucket rotation	160 or 180 degrees	160 or 180 degrees	160 or 180 degrees
H. Transport height	11 ft. 11 in. (3.63 m)	12 ft. 7 in. (3.84 m)	12 ft. 7 in. (3.84 m)
I. Overall length, transport	22 ft. 7 in. (6.88 m)	22 ft. 7 in. (6.88 m)	22 ft. 7 in. (6.88 m)
J. Stabilizer width – transport w/ROPS	7 ft. (2.12 m)	7 ft. (2.12 m)	7 ft. (2.12 m)
K. Stabilizer spread – operating	10 ft. (3.05 m)	10 ft. (3.05 m)	10 ft. (3.05 m)
L. Stabilizer overall width – operating	11 ft. 6 in. (3.50 m)	11 ft. 6 in. (3.50 m)	11 ft. 6 in. (3.50 m)
M. Width over tires**	85 in. (2.15 m)	85 in. (2.15 m)	85 in. (2.15 m)

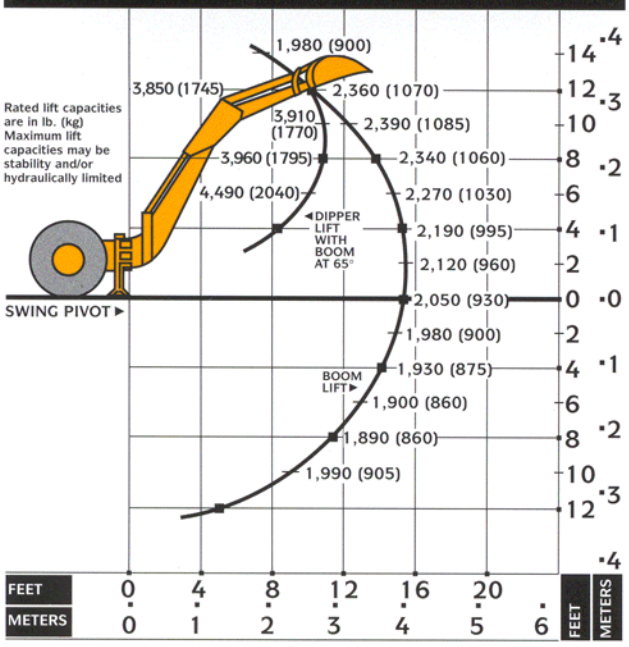
*See backhoe performance.
**Width over tires with 16.9-24, 8 PR R4 tires is 81 in. (2.05 m).

BACKHOE PERFORMANCE

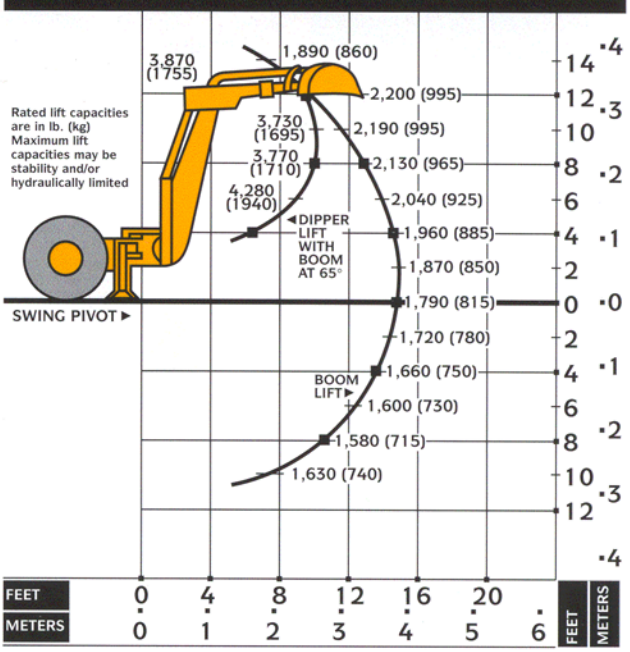
Digging force, bucket cylinder (power dig position)	11,570 lb. (51.5 kN)	11,530 lb. (51.3 kN)	11,530 lb. (51.3 kN)
Digging force, crowd cylinder	6,650 lb. (29.6 kN)	6,700 lb. (29.8 kN)	4,550 lb. (20.2 kN)
Swing arc	180 degrees	180 degrees	180 degrees
Operator control	Two levers	Right foot treadle	Right foot treadle
Bucket positions	12 or 21 degree rollback	8 or 17 degree rollback	13 or 21 degree rollback
Stabilizer angle rearward	13 degrees	13 degrees	13 degrees
Lifting capacity, maximum	5,200 lb. (2358 kg)	5,000 lb. (2267 kg)	3,050 lb. (1383 kg)
Leveling angle	14 degrees	14 degrees	14 degrees

*Backhoe specifications are with 24-in. x 7.5 cu. ft. (610 mm x 0.21 m^3) bucket.

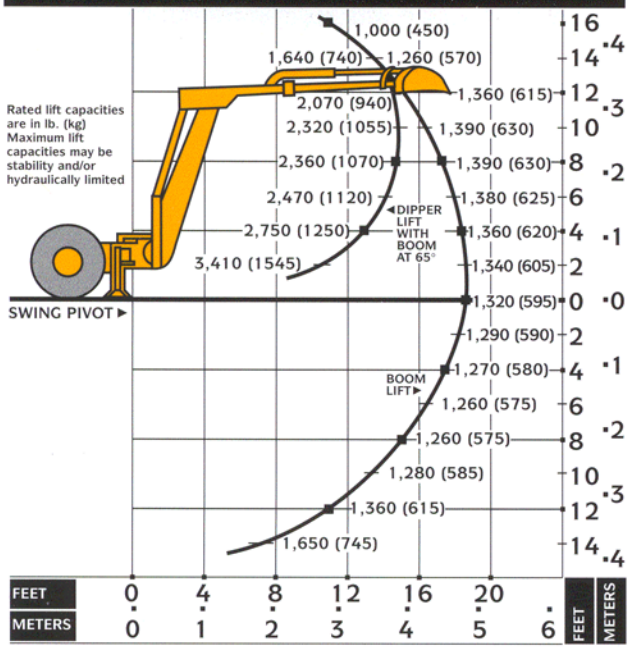
LIFT CAPACITY Backhoe with standard dipperstick. Based on SAE J31.



LIFT CAPACITY Backhoe with 4-ft. (1.22 m) dipperstick, retracted. Based on SAE J31.



LIFT CAPACITY Backhoe with 4-ft. (1.22 m) dipperstick, extended. Based on SAE J31.



BACKHOE BUCKETS

	Width		Capacity		Weight	
	in.	(mm)	cu. ft.	(m^3)	lb.	(kg)
Standard-duty	12	(305)	2.5	(0.07)	244	(111)
	18	(457)	5.1	(0.14)	322	(146)
	24	(610)	7.5	(0.21)	370	(168)
	30	(762)	10.0	(0.28)	410	(186)
	36	(914)	10.0	(0.28)	430	(195)
	36	(914)	14.5	(0.41)	556	(252)
Heavy-duty with lift hook	12	(305)	2.5	(0.07)	258	(117)
	18	(457)	5.1	(0.14)	334	(151)
	24	(610)	7.5	(0.21)	396	(180)
	24	(610)	8.8	(0.25)	476	(216)
	30	(762)	10.0	(0.28)	444	(201)
	36	(914)	10.0	(0.28)	480	(217)
Extra heavy-duty with lift hook	18	(457)	5.1	(0.14)	362	(164)
	24	(610)	7.5	(0.21)	424	(192)
	30	(762)	10.0	(0.28)	474	(215)
Ditch cleaning	36	(914)	10.0	(0.28)	370	(168)
	36	(914)	14.5	(0.41)	500	(235)

LOADER BUCKETS

	Width		Heaped Capacity		Weight	
Loader:	in.	(mm)	cu. yd.	(m^3)	lb.	(kg)
Heavy-duty long lip*	86	(2184)	1.12	(0.86)	918	(417)
	92	(2340)	1.42	(1.09)	965	(438)
General purpose long lip	89	(2270)	1.25	(0.96)	775	(351)
Multipurpose	92	(2340)	1.25	(0.96)	1,560	(708)

*With auxiliary cutting edge and skid shoes standard.
NOTE: All buckets pre-drilled for auxiliary cutting edge.

LOADER PERFORMANCE

	w/1.12 cu. yd. (0.86 m^3) Heavy-Duty Long Lip Bucket	w/1.25 cu. yd. (0.96 m^3) General Purpose Long Lip Bucket	w/1.42 cu. yd. (1.09 m^3) Heavy-Duty Long Lip Bucket	w/1.25 cu. yd. (0.96 m^3) Multi-purpose Bucket
Operator control	single lever	single lever	single lever	single lever
Breakout force	9,350 lb. (41.6 kN)	7,420 lb. (33.0 kN)	8,240 lb. (36.7 kN)	7,240 lb. (32.2 kN)
Lifting capacity, full height	5,700 lb. (2585 kg)	5,330 lb. (2415 kg)	5,500 lb. (2495 kg)	5,070 lb. (2300 kg)
a) Height to bucket hinge pin, max.	10 ft. 11 in. (3.33 m)	10 ft. 11 in. (3.33 m)	10 ft. 11 in. (3.33 m)	10 ft. 11 in. (3.33 m)
b) Dump clearance, bucket at 45 degrees	9 ft. (2.74 m)	8 ft. 5 in. (2.56 m)	8 ft. 8 in. (2.65 m)	8 ft. 5 in. (2.56 m)
c) Bucket dump angle, max.	45 degrees	45 degrees	45 degrees	45 degrees
d) Reach at full height, bucket at 45 degrees	27 in. (686 mm)	33.6 in. (855 mm)	29.2 in. (743 mm)	29.6 in. (753 mm)
e) Rollback angle at ground level	40 degrees	40 degrees	40 degrees	40 degrees
f) Digging depth below ground, bucket level	4 in. (100 mm)	3.4 in. (86 mm)	4 in. (100 mm)	6 in. (150 mm)
Raising time to full height	4.0 sec.	4.0 sec.	4.0 sec.	4.0 sec.
Bucket dump time	1.1 sec.	1.1 sec.	1.1 sec.	1.1 sec.
Bucket lowering time (power down)	2.3 sec.	2.3 sec.	2.3 sec.	2.3 sec.