

ENGINE

John Deere engineered and manufactured. Replaceable wet type cylinder liners provide superior heat dissipation, longer life. High strength alloy heads have 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 @ 2200 rpm 70 SAE net hp (52.2 kW)
 74 SAE gross hp (55.8 kW)
 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, standard at 1200 rpm 20 percent
 with optional turbocharger 25 percent
 Maximum net torque at 1200 rpm 215 lb-ft (292 Nm)
 with optional turbocharger 291 lb-ft (395 Nm)
 Lubrication pressure system w/full flow filter and cooler
 Air cleaner dual stage dry type with safety element
 and precleaner

Electrical system 12 volt with 78-amp alternator

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

Gear	Forward		Reverse	
	mph	(km/h)	mph	(km/h)
1	3.8	5.1	3.4	5.5
2	6.5	10.4	5.8	9.4
3	13.9	22.3	12.5	20.1
4	25.3	40.7	22.8	36.6

Four-speed transmission with 16.9-28 rear tyres

FINAL DRIVES

Heavy-duty, inboard mounted planetary type. Evenly distributes 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, self-equalizing, require no periodic service. Individual pedals allow them to 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. A mechanical V-groove band applies pressure on differential ring gear. All brakes conform to SAE J1473.

STEERING

Hydrostatic power steering gives superior control at all speeds. Excellent steering torque allows easy maneuvering with heavy loads. Emergency steering conforms to 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 oscillation stop to stop, both axles 22 degrees

Axle ratings:	Static	Dynamic	SAEJ43
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 2700 psi (18 620 kPa)
 Pump gear type
 Flow at 2200 rpm 35 gpm (133 L/min)
 Filter, return oil 10 micron, spin-on enclosed
 replaceable element

TYRES

Front	Rear
11L-16, 12 PR, F3	16.9-28, 8 PR, R4
With mechanical-front-wheel drive	
10.5-18, 8 PR TG2	16.9-28, 8 PR, R4

CAPACITIES

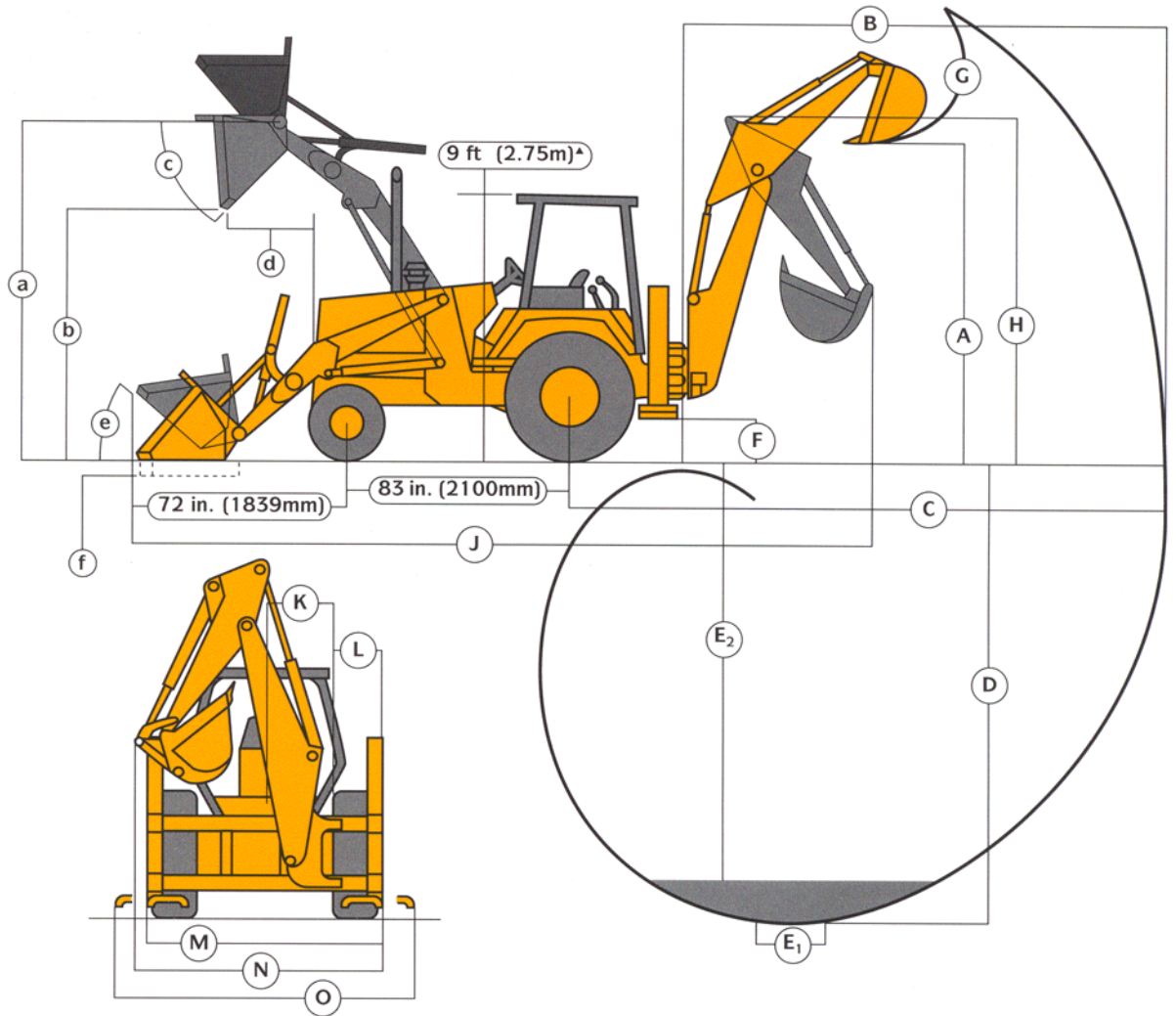
	U.S.
Fuel tank	28 gal. (106 L)
Engine coolant	17 qt. (16 L)
Engine oil including filter	9 qt. (8.5 L)
Torque converter and reverser system	8 qt. (7 L)
Hydraulic system	21 gal. (79 L)
Transaxle with MFWD	6 gal. (23 L)

OPERATING WEIGHTS

SAE
 315D 14,000 lb. (6350 kg)
 cab adds 500 lb. (227 kg)
 mechanical-front-wheel drive
 with tyres adds 220 lb. (100 kg)
 extendable dipperstick excluding required
 counterweight adds 430 lb. (195 kg)
 optional front counterweight 370 lb. (169 kg)*
 optional front counterweight 770 lb. (349 kg)*
 backhoe bucket coupler adds 200 lb. (91 kg)
 See backhoe and loader performance data for bucket weights

*Denotes 30 lb. (14 kg) weight reduction when front bumper removed.

DIMENSIONS



▲ ROPS and cab

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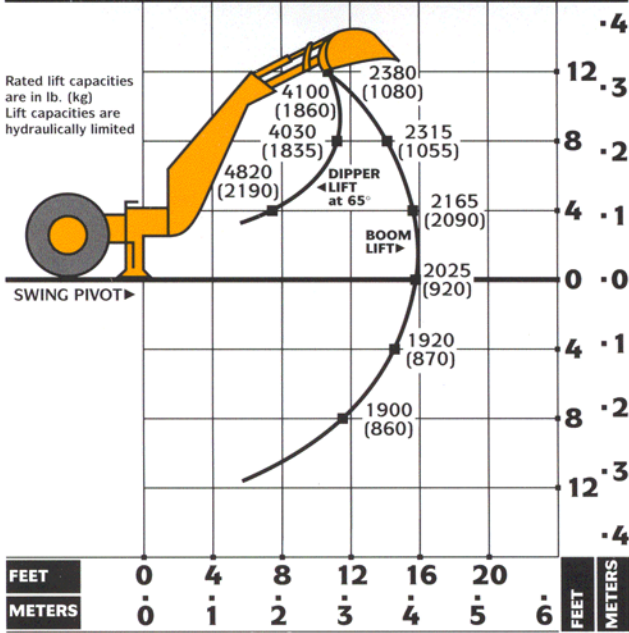
	Backhoe*	Extendable Dipperstick Retracted	Extended
A. Loading height, truck loading position	11 ft. 11 in. (3.63 m)	12 ft. 2 in. (3.71 m)	14 ft. 6 in. (4.42 m)
B. Reach from center of swing mast	17 ft. 9 in. (5.41 m)	17 ft. 9 in. (5.41 m)	21 ft. 4 in. (6.50 m)
C. Reach from center of rear axle	21 ft. 9 in. (6.63 m)	21 ft. 9 in. (6.63 m)	25 ft. 4 in. (7.72 m)
D. Maximum digging depth	14 ft. 1 in. (4.29 m)	14 ft. 1 in. (4.29 m)	18 ft. 0 in. (5.49 m)
E. Digging depth (SAE):			
(1) 2-ft. (610 mm) flat bottom	13 ft. 11.5 in. (4.25 m)	13 ft. 11.5 in. (4.25 m)	17 ft. 9.5 in. (5.42 m)
(2) 8-ft. (2440 mm) flat bottom	12 ft. 9 in. (3.89 m)	12 ft. 9 in. (3.89 m)	16 ft. 10 in. (5.13 m)
F. Ground clearance, minimum	13.8 in. (350 mm)	13.8 in. (350 mm)	13.8 in. (350 mm)
G. Bucket rotation	160 or 180 degrees	160 or 180 degrees	160 or 180 degrees
H. Transport height	12 ft. 3 in. (3.73 m)	12 ft. 5 in. (3.78 m)	12 ft. 5 in. (3.78 m)
J. Overall length, transport	18 ft. 6 in. (5.63 m)	18 ft. 6 in. (5.63 m)	18 ft. 6 in. (5.63 m)
K. Side-shift from tractor centerline	23.5 in. (597 mm)	23.5 in. (597 mm)	23.5 in. (597 mm)
L. Wall to swing centerline	20.6 in. (523 mm)	20.6 in. (523 mm)	20.6 in. (523 mm)
M. Stabilizer width — pads turned in	88.2 in. (2240 mm)	88.2 in. (2240 mm)	88.2 in. (2240 mm)
N. Overall width (less loader bucket)	97.6 in. (2480 mm)	97.6 in. (2480 mm)	97.6 in. (2480 mm)
O. Stabilizer width — pads turned out	103.5 in. (2630 mm)	103.5 in. (2630 mm)	103.5 in. (2630 mm)

BACKHOE PERFORMANCE

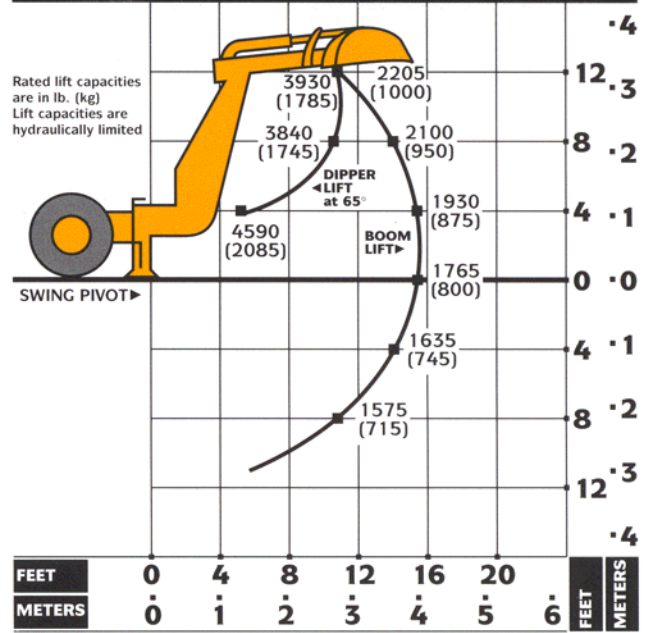
Digging force, bucket cylinder (power dig position)	11,570 lb. (51.5 kN)	11,530 lb. (51.3 kN)	11,530 lb. (51.3 kN)
Digging force, crowd cylinder	6650 lb. (29.6 kN)	6700 lb. (29.8 kN)	4550 lb. (20.2 kN)
Swing arc	180 degrees	180 degrees	180 degrees
Operator control	Two levers	Right foot treadle	Right foot treadle
Bucket positions	12 or 21 degree rollback	8 or 17 degree rollback	13 or 21 degree rollback
Lifting capacity, maximum, boom at 65 deg.	4600 lb. (2087 kg)	4400 lb. (1996 kg)	2700 lb. (1225 kg)
Leveling angle	8 degrees	8 degrees	8 degrees

*Backhoe specifications are with 24-in. x 7.5 cu. ft. (610 mm x 0.21 m³) bucket.

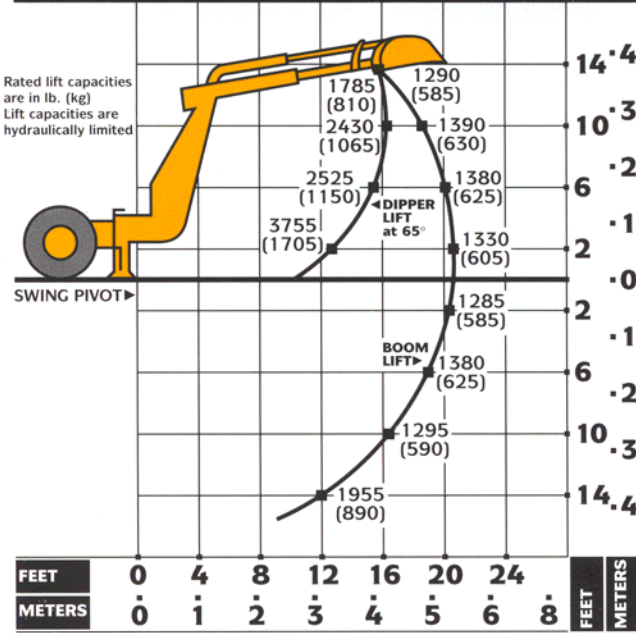
LIFT CAPACITY Backhoe with standard dipperstick. Based on SAE J31.



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	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)	9.9 (0.28)	430 (195)
	36 (914)	14.5 (0.41)	556 (252)

LOADER BUCKETS

Loader:	Width	Heaped Capacity	Weight
	in. (mm)	cu. yd. (m ³)	lb. (kg)
General purpose	92 (2340)	1.0 (0.76)	740 (335)
	92 (2340)	1.3 (1.00)	800 (363)
Long lip Multipurpose	89 (2270)	1.25 (0.96)	775 (351)
	92 (2340)	1.25 (0.96)	1560 (708)

LOADER PERFORMANCE

	w/1.0 cu. yd. (0.76 m ³) Standard Bucket	w/1.25 cu. yd. (0.96 m ³) Long-Lip Bucket	w/1.3 cu. yd. (1.15 m ³) Optional Bucket	w/1.25 cu. yd. (0.96 m ³) Optional Bucket
Operator control	single lever	single lever	single lever	single lever
Breakout force	9350 lb. (41.6 kW)	6805 lb. (30.2 kW)	8175 lb. (36.2 kW)	7235 lb. (32.2 kW)
Lifting capacity, full height	5700 lb. (2585 kg)	5085 lb. (2305 kg)	5263 lb. (2385 kg)	4530 lb. (2050 kg)
a) Height to bucket hinge pin, max	10 ft. 11 in. (3.30 m)	10 ft. 11 in. (3.30 m)	10 ft. 11 in. (3.30 m)	10 ft. 11 in. (3.30 m)
b) Dump clearance, bucket at 45 degrees	9 ft. (2.74 m)	8 ft. 9 in. (2.66 m)	9 ft. (2.74 m)	8 ft. 9 in. (2.66 m)
c) Bucket dump angle, max.	45 degrees	45 degrees	45 degrees	45 degrees
d) Reach at full height, bucket at 45 degrees	28 in. (711 mm)	29.5 in. (750 mm)	25.1 in. (638 mm)	25.5 in. (650 mm)
e) Rollback at ground level	40 degrees	40 degrees	40 degrees	40 degrees
f) Digging depth below ground bucket level	4 in. (100 mm)	4 in. (100 mm)	4 in. (100 mm)	4 in. (100 mm)
Raising time to full height	4.4 sec.	4.4 sec.	4.4 sec.	4.4 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.