



TRC & MOWER CO., INC.  
Rt. 92 East  
P.O. Box 439  
Genoa, Ohio 43024

# 300D

## BACKHOE LOADER



**SAE Net  
Horsepower**

60 hp  
(45 kW)

**Digging  
Depth**

14 ft.  
(4.27 m)

**Loader  
Lift**

4600 lb.  
(2087 kg)

Model shown may include options

## 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

Rated power at 2200 rpm	60 SAE net hp (45 kW)
	65 SAE gross hp (47 kW)
Cylinders	4
Displacement	239 cu. in. (3.917 L)
Fuel consumption, typical	1.12 to 1.75 gal/hr (4.25 to 6.6 L/h)
Torque rise, 20 percent	172 lb-ft (233 Nm)
Lubrication	pressure system w/full flow filter
Air cleaner	dual stage dry type with safety element and precleaner
Electrical system	12 volt with 65 amp alternator

## TRANSMISSION

John Deere designed and built 4-speed helical gear, synchronized collar shift transmission with hydraulic reverser. Uses single stage, dual phase 11-inch (280 mm) torque converter with 2.78:1 stall ratio.

### TRAVEL SPEEDS

	Gear	Forward		Reverse	
		mph	(km/h)	mph	(km/h)
With 16.9-24 rear tires	1	3.4	5.4	3.3	5.2
	2	5.7	9.2	5.6	9.0
	3	12.3	19.8	12.2	19.6
	4	20.1	32.3	18.0	29.0

## 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, 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.

## 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	16 gal.	(60 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 J53.

Non-powered axle	
Curb turning radius with brakes	12 ft. 0 in. (3.67 m)
without brakes	13 ft. 2 in. (4.0 m)
Bucket clearance circle with brakes	32 ft. 5 in. (9.89 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	11 ft. 9 in. (3.57 m)
without brakes	13 ft. 5 in. (4.10 m)
Bucket clearance circle with brakes	30 ft. 9 in. (9.38 m)
without brakes	34 ft. 3 in. (10.44 m)
Steering wheel turns, stop to stop	2.5
Axle oscillations stop to stop, both axes	22 degrees

Axle ratings:	Static	Dynamic	SAEJ43
Front	56,000 lb. (25,300 kg)	56,000 lb. (25,300 kg)	16,300 lb. (7,400 kg)
Rear	41,000 lb. (18,600 kg)	54,700 lb. (24,800 kg)	13,900 lb. (6,300 kg)

## HYDRAULICS

System	open center
Pressure, main relief	2700 psi (18,620 kPa)
Pump	gear type
Flow at 2200 rpm	24 gpm (91 L/min)
Filter, return oil	10 micron, spin-on, replaceable element

## CYLINDERS

	Bore		Stroke		Rod	
	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)
Loader boom (2)	2.76	70	29.80	757	1.77	45
Loader bucket (1)	2.76	70	28.15	715	1.57	40
Backhoe boom (1)	3.94	100	38.54	979	1.97	50
Backhoe crowd (1)	3.54	90	32.87	835	1.97	50
Backhoe bucket (1)	3.15	80	31.00	788	1.77	45
Backhoe swing (2)	3.15	80	10.94	278	1.77	45
Backhoe extendable dipper (1)	2.50	64	48.00	1220	1.25	32
Backhoe stabilizer (2)	3.54	90	15.51	394	1.77	45
Steering (1) regular axle	1.97	50	9.49	241	0.98	25
Steering (1) MFWD	2.36	60	7.90	202	1.25	32

## TIRES

Rear	Front
16.9-24, 8 PR R4	11L-15, 8 PR, I-1A
17.5L-24, 8 PR, R4	11L-15, 8 PR, I-1A
With mechanical-front-wheel drive	
16.9-24, 8 PR R4	12-16.5, 8 PR

## OPERATING WEIGHTS

SAE 300D	12,200 lb. (5533 kg)
cab adds	500 lb. (227 kg)
mechanical-front-wheel drive adds	220 lb. (100 kg)
extendable dipperstick excluding required counterweight adds	360 lb. (163 kg)
optional 400-lb. counterweight adds	370 lb. (169 kg)
optional 800-lb. counterweight adds	770 lb. (349 kg)

See backhoe and loader performance data for bucket weights  
\* Denotes 30-lb. (14 kg) weight reduction when bumper removed.



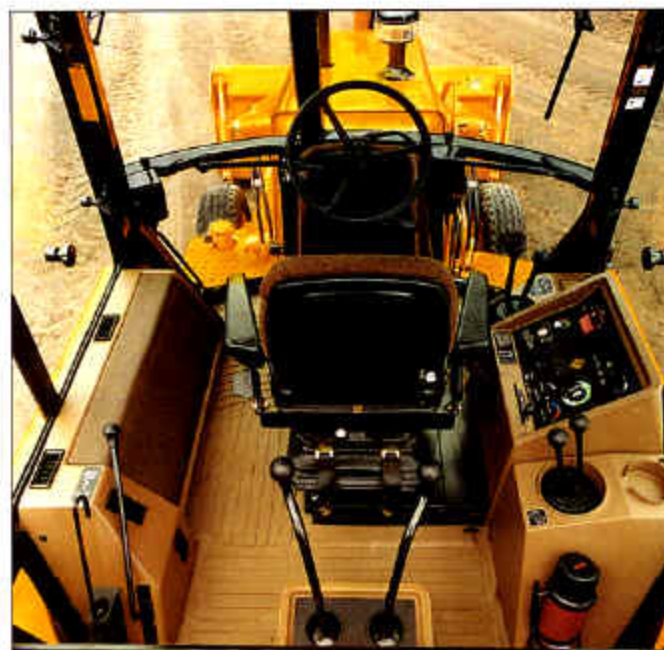
## MAINFRAME

All drivetrain components are mounted independently to the massive one-piece unitized mainframe where they are isolated from working stress and shock loads. And each drivetrain component can be removed independently of the others to speed repairs and reduce downtime.



## VERTICAL BACKHOE

When locked for transport, the backhoe stores in a vertical position. Provides superior weight distribution for smooth transport and optimum performance for backfilling and truck loading. Bucket is stored high for good clearance when working in rough terrain or when loading and unloading from a trailer.



## OPERATOR'S STATION

The industry standard. Large entrance doors on both sides allow convenient entrance and exit. Open within machine's width so they aren't susceptible to damage. Electronic monitor provides audible and visible warnings. 4700 sq. in. (30 322 cm<sup>2</sup>) of window area opens for excellent ventilation.



## LOADER DESIGN

A single dump cylinder on the loader bucket gives the operator an unobstructed view to the bucket. Simpler linkage, one less cylinder and joint to lubricate and maintain, reduces time and expense.

# BACKHOE PERFORMANCE

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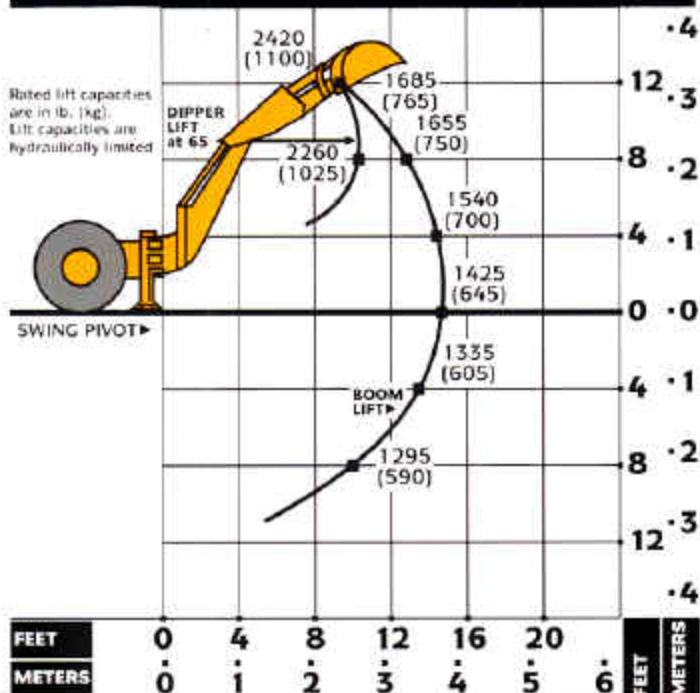
Digging force, bucket cylinder (power dig position)	10,235 lb. (45.5 kN)
Digging force, crowd cylinder	5530 lb. (24.6 kN)
Swing arc	180 degrees
Operator control	Two levers
Bucket positions	21 or 30 deg. rollback
Stabilizer angle rearward	12 degrees
Lifting capacity, maximum, boom at 65 deg.	2700 lb. (1225 kg)
Leveling angle, (fixed foot)	8.5 degrees
(pivoting foot)	11 degrees

\* Backhoe specifications are with 24-in x 6.0 cu. ft. (610 mm x 0.17 m<sup>3</sup>) bucket.

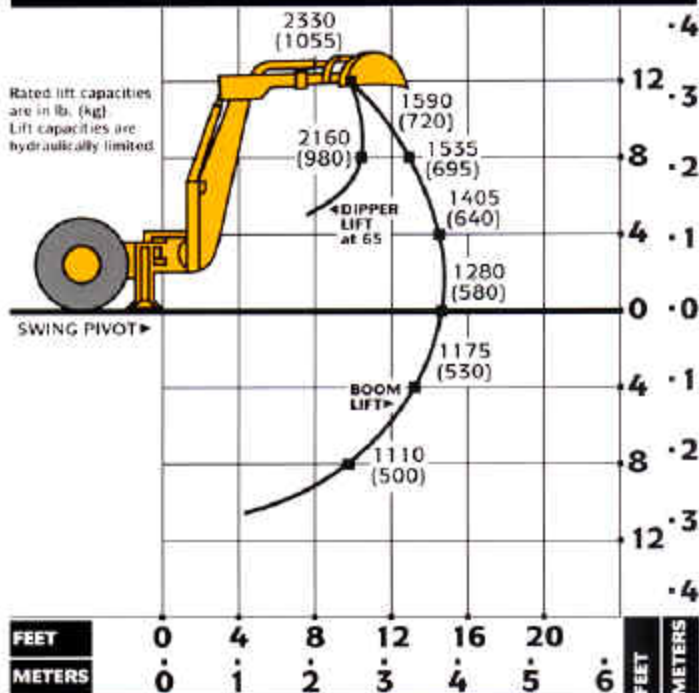
## Extendable Dipperstick

Retracted	Extended
10,225 lb. (45.5 kN)	10,225 lb. (45.5 kN)
5540 lb. (24.6 kN)	3365 lb. (15.0 kN)
180 degrees	180 degrees
Right foot treadle	Right foot treadle
12 degrees	12 degrees
19 or 28 deg. rollback	22 or 32 deg. rollback
2600 lb. (1180 kg)	1550 lb. (700 kg)
8.5 degrees	8.5 degrees
11 degrees	11 degrees

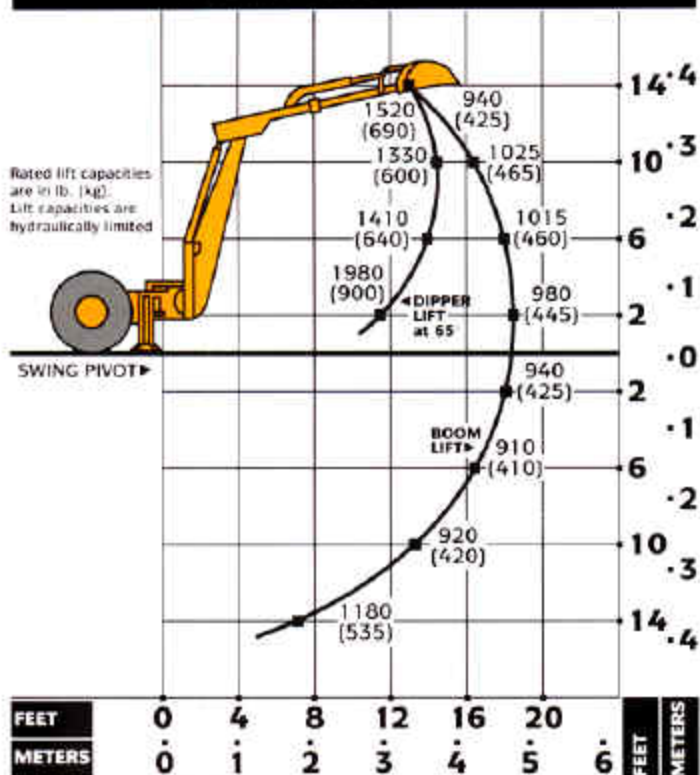
## LIFT CAPACITY Backhoe with standard dipperstick. Based on SAE J31.



## 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 <sup>3</sup> )	lb.	(kg)
Standard-duty	12	(305)	2.5	(0.07)	244	(111)
	16	(406)	3.6	(0.10)	268	(122)
	18	(457)	4.1	(0.12)	278	(126)
	24	(610)	6.0	(0.17)	328	(149)
	24	(610)	7.5	(0.21)	370	(168)
Heavy-duty	30	(762)	7.9	(0.22)	364	(165)
	36	(914)	10.0	(0.28)	439	(195)
	12	(305)	2.5	(0.07)	258	(117)
Extra heavy-duty	18	(457)	5.1	(0.14)	302	(137)
	24	(610)	6.0	(0.17)	334	(151)
	24	(610)	7.5	(0.21)	396	(180)
	18	(457)	5.1	(0.14)	362	(164)
	24	(610)	7.5	(0.21)	424	(192)
	30	(762)	10.0	(0.28)	474	(215)

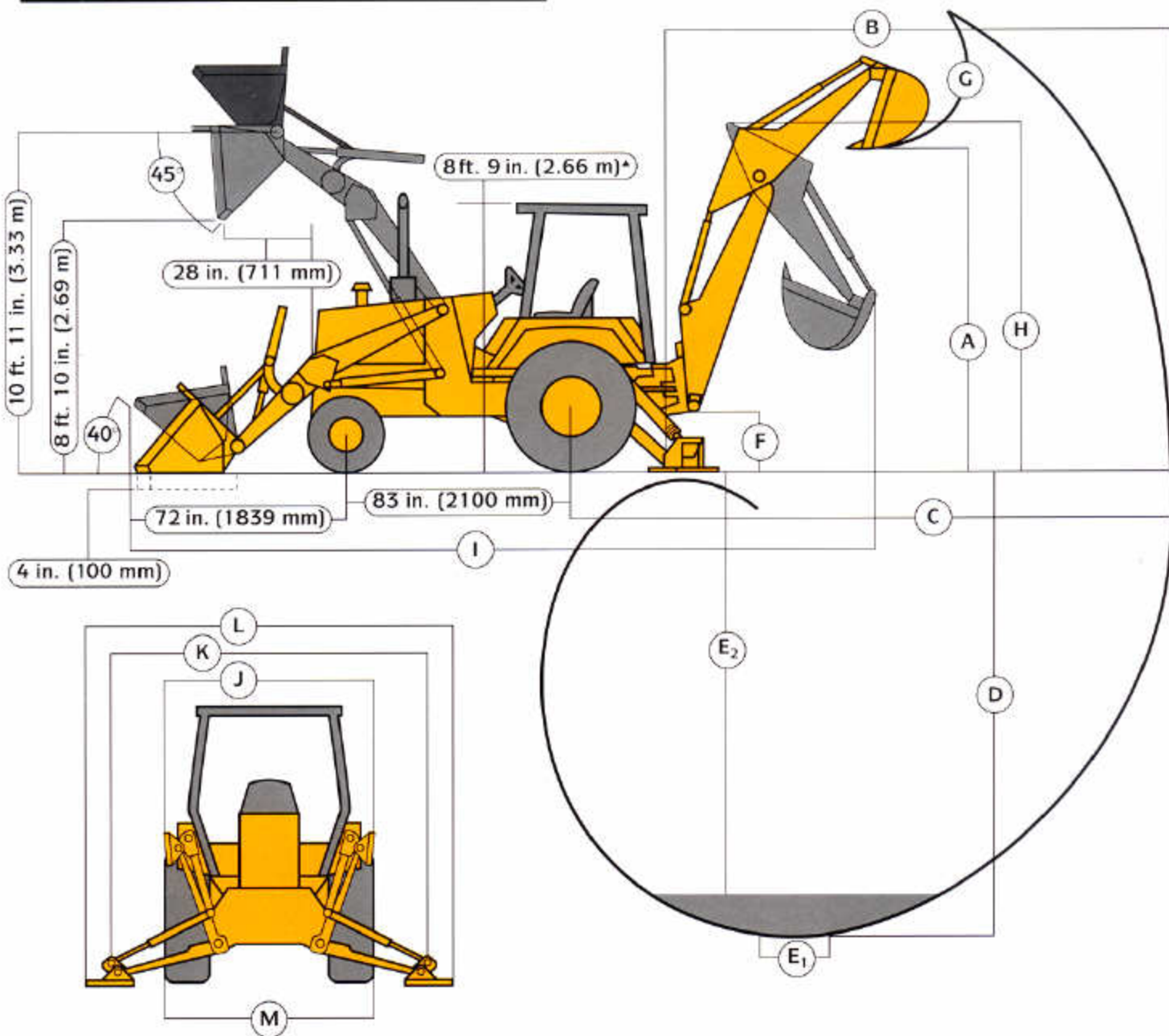
## LOADER PERFORMANCE

Operator control	single lever
Breakout force	6700 lb. (29.8 kN)
Lifting capacity, full height	4600 lb. (2090 kg)
Raising time to full height	4.5 sec.
Bucket dump time	1.1 sec.
Bucket lowering time (power down)	2.5 sec.

## LOADER BUCKETS

Loader:	Width		Heaped Capacity		Weight	
	In.	(mm)	cu. yd.	(m <sup>3</sup> )	lb.	(kg)
General purpose	81	(2057)	0.88	(0.67)	550	(249)
	92	(2340)	1.0	(0.76)	810	(367)
Multipurpose	84	(2134)	1.0	(0.76)	1341	(608)

# DIMENSIONS



▲ w/cab 9 ft. (2.74 m)

## Key:

	Backhoe*
A. Loading height, truck loading position	10 ft. 9 in. (3.29 m)
B. Reach from center of swing mast	17 ft. 3 in. (5.25 m)
C. Reach from center of rear axle	20 ft. 7 in. (6.28 m)
D. Maximum digging depth	14 ft. (4.27 m)
E. Digging depth (SAE.)	
(1) 2-ft. (610 mm) flat bottom	13 ft. 10 in. (4.21 m)
(2) 8-ft. (2440 mm) flat bottom	12 ft. 8 in. (3.87 m)
F. Ground clearance, minimum	13 in. (330 mm)
G. Bucket rotation	160 or 180 degrees
H. Transport height	12 ft. (3.67 m)
I. Overall length, transport	22 ft. 6 in. (6.85 m)
J. Stabilizer width—transport (fixed foot)	6 ft. 7 in. (2.00 m)
(pivoting foot)	7 ft. 4 in. (2.23 m)
K. Stabilizer spread, operating (fixed foot)	8 ft. 3 in. (2.51 m)
(pivoting foot)	8 ft. 11 in. (2.71 m)
L. Stabilizer overall width, operating (pivoting foot)	10 ft. 6 in. (3.20 m)
M. Width over tires	85 in. (2.15 m)

\*See backhoe performance

## Extendable Dipperstick

	Retracted	Extended
A. Loading height, truck loading position	11 ft. 1 in. (3.37 m)	12 ft. 9 in. (3.88 m)
B. Reach from center of swing mast	17 ft. 3 in. (5.25 m)	20 ft. 10 in. (6.36 m)
C. Reach from center of rear axle	20 ft. 7 in. (6.28 m)	24 ft. 3 in. (7.39 m)
D. Maximum digging depth	14 ft. (4.27 m)	17 ft. 9 in. (5.41 m)
E. Digging depth (SAE.)		
(1) 2-ft. (610 mm) flat bottom	13 ft. 10 in. (4.21 m)	17 ft. 8 in. (5.38 m)
(2) 8-ft. (2440 mm) flat bottom	12 ft. 8 in. (3.87 m)	16 ft. 10 in. (5.13 m)
F. Ground clearance, minimum	13 in. (330 mm)	13 in. (330 mm)
G. Bucket rotation	160 or 179 degrees	160 or 179 degrees
H. Transport height	12 ft. (3.67 m)	12 ft. (3.67 m)
I. Overall length, transport	22 ft. 6 in. (6.85 m)	22 ft. 6 in. (6.85 m)
J. Stabilizer width—transport (fixed foot)	6 ft. 7 in. (2.00 m)	6 ft. 7 in. (2.00 m)
(pivoting foot)	7 ft. 4 in. (2.23 m)	7 ft. 4 in. (2.23 m)
K. Stabilizer spread, operating (fixed foot)	8 ft. 3 in. (2.51 m)	8 ft. 3 in. (2.51 m)
(pivoting foot)	8 ft. 11 in. (2.71 m)	8 ft. 11 in. (2.71 m)
L. Stabilizer overall width, operating (pivoting foot)	10 ft. 6 in. (3.20 m)	10 ft. 6 in. (3.20 m)
M. Width over tires	85 in. (2.15 m)	85 in. (2.15 m)

## ADDITIONAL STANDARD EQUIPMENT

**Engine:**  
Enclosed safety fan guard  
Conforms to SAE J1308  
Engine coolant to -34°F (-37°C)  
Under hood muffler with vertical curved end exhaust stack

**Power Train:**  
Cooler-oil to air for reverser/torque converter system, transaxle and brakes

Electric clutch cutoff  
Electric shuttle control  
Differential lock with padded pedal

**Backhoe:**  
Dirt foot stabilizer pad  
Independent side console mounted stabilizer control

Patented high penetration, high wear resistant bucket teeth  
Remote backhoe transport lock  
Two-lever backhoe control

**Loader:**  
Bucket level indicator

Built-in lift hooks on bucket  
Hydraulic self-leveling  
Return to dig  
Single lever control with electric clutch cutoff

**Operator's Station:**  
Built-in Operator's Manual storage compartment and manual  
Built-in beverage and Thermos bottle holder

Coat hook  
Electronic monitor system with audible and visual warning  
Air cleaner restriction  
Alternator  
Coolant temperature  
Engine oil pressure  
Hydraulic filter indicator  
Torque converter temperature

Fuel gauge  
Hand throttle and padded foot throttle  
Horn  
Hourmeter

Interior mounted rearview mirror  
Conforms to SAE J985  
Key start switch with electric fuel shutoff  
Lights, halogen driving/working  
Two front  
One rear stop and tail  
35,200 candlepower (375 737 lux) each  
Conforms to SAE J99  
Modular design ROPS/FOPS Canopy  
Conforms to SAE J1040  
Non suspension seat  
Flip up armrests  
Conforms to SAE J899  
Park brake indicator  
Rear reflectors  
Slip resistant safety steps and ergonomically located handholds  
Conforms to SAE J185  
2-in (51 mm) seat belt with retractors  
Conforms to SAE J386

**Overall Vehicle:**  
Built-in tie downs  
Dent resistant rear fenders  
Engine side shields with convenient "tip up" service access  
Remote grease bank for front axle  
Rigid supported front bumper  
Vandal protection, locking provision for  
Engine access doors  
Fuel tank cap  
Instrument panel

**Electrical:**  
Blade-type multi-fused circuits  
Bypass start safety cover at starter  
Positive terminal battery covers  
Single battery, 180-min. reserve capacity

**Hydraulics:**  
Independent hydraulic reservoir  
Independent isolation mounted stabilizer valve  
Two direction stabilizer anti-drift valves  
"O" ring face seal connectors

## OPTIONAL OR SPECIAL EQUIPMENT

**Engine:**  
John Deere 4039T  
3.9 liter 60 hp (45 kW) turbocharged engine\*  
Engine coolant heater 1000 watts  
Remote mounted ether starting aid

**Power Train:**  
Mechanical-front-wheel drive  
Driveshaft guard  
Electric on/off control  
Limited slip differential

**Backhoe:**  
Alternate stabilizer pads  
Auxiliary function backhoe hydraulics  
Backhoe bucket coupler  
Backhoe controls

Case pattern with three-lever foot swing  
Ford pattern with four levers  
SAE excavator pattern\*  
Extendable dipperstick  
Four-foot extension  
Lifetime wearstrips

Extra function backhoe valve and controller  
Heavy-duty and extra heavy-duty backhoe buckets  
Built-in lift eyes  
Ripper tooth  
Stabilizer cylinder guards\*

**Loader:**  
Alternate buckets  
Higher capacity general purpose  
Long lip configuration  
Multipurpose

Auxiliary function loader hydraulics  
Bolt-on auxiliary cutting edge  
Third function loader hydraulics  
Dual tracking levers  
Loader boom service lock\*

**Operator's Station:**  
Cab  
Cab pressurizer  
24-in Hg pressurization  
Deluxe headliner  
Deluxe "eyeball" dome light

Doors that open within vehicle width  
Fresh air intake heater/defroster/pressurizer  
40,000 Btu/hr (11.7 kW) heater  
Conforms to SAE J1535D, J1503

Fresh air precleaner  
Front and rear wipers  
Windshield washers  
Air conditioning  
27,000 Btu/hr (7.9 kW) capacity  
Conforms to SAE J1503

Deluxe suspension seat  
Front quarter cab  
Front doors only  
Headliner  
Lateral seat slides\*  
Radio  
Tachometer/hourmeter  
3-in. (76 mm) seat belt  
Tinted safety glass

**Overall Vehicle:**  
Deluxe lights, halogen driving/working  
Two front, two rear  
Stop and tail (two rear)  
Flashing and turn signals  
Two front, two rear

Dual batteries  
Fan blast dust shields  
Fire extinguisher  
Front counterweights  
400 lb. (181 kg)  
800 lb. (363 kg)  
High-floatation tires  
Front grille guard\*  
Front grille screens\*  
Reverse alarm  
Conforms to SAE J994, J1446  
Rotating beacon  
SMV emblem  
Special color paint\*  
Toolbox  
\* See your John Deere dealer for further information.

## JOHN DEERE 'BEST VALUE' EXTRAS

**Best parts support**—Twelve regional parts depots in North America and others around the world put parts support near your job no matter where in the world it is.

A computerized FLASH™ parts locating system linking these depots to dealerships can find out-of-stock parts in a hurry and get them into your hands fast. Usually within 24 hours.

**Best service backup**—Dealer service technicians are regularly schooled, at our modern facility in Davenport, Iowa, or by professionals in the field, to diagnose quickly and repair efficiently.

**Best dealers**—Your John Deere dealer has made a significant commitment to being the best equipment supplier you can work with.

This is a dollars-and-cents commitment in parts inventory, in service facilities, in field service trucks. It's a sweat-and-blood commitment in dedicated, skilled and highly trained and motivated personnel in each and every department at the dealership.

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 at 35 API gravity. No derating is required up to 5,000 feet (1,500 m) altitude. Gross power is without cooling fan

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 16.9-24, 8 PR rear tires, 11L-15, 8 PR front tires, 0.88 cu. yd. (0.67 m<sup>3</sup>) loader bucket, 24 in. x 6.0 cu. ft. (610 mm x 0.17 m<sup>3</sup>) backhoe bucket.

