



TED B. MILLER CO., INC.
Hwy 92 East
P.O. Box 460
Greting, Nebr. 69341

410'D

BACKHOE LOADER



Model shown may include options

**SAE Net
Horsepower**

75 hp
(56 kW)

**Digging
Depth**

15 ft. 4 in.
(4.67 m)
(long stick)

**Loader
Lift**

6,700 lb.
(3040 kg)

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 4045D	
Rated power @ 2200 rpm	75 SAE net hp (56 kW)
	80 SAE gross hp (60 kW)
with optional turbocharger	85 SAE net hp (63.5 kW)
	90 SAE gross hp (67 kW)
Cylinders	4
Displacement	276 cu. in. (4,524 L)
Fuel consumption, typical	1.0 to 2.0 gal/hr (4.7 to 7.6 L/h)
Torque rise, standard at 1300 rpm	25 percent
with optional turbocharger at 1350 rpm	25 percent
Maximum net torque at 1300 rpm	224 lb/ft (303 Nm)
with optional turbocharger at 1350 rpm	254 lb/ft (344 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 2.23:1 stall ratio.

TRAVEL SPEEDS

Gear	Forward		Reverse	
	mph	(km/h)	mph	(km/h)
With 21L-24 rear tires				
1	3.3	5.3	3.9	6.3
2	5.7	9.2	6.6	10.6
3	12.1	19.5	14.0	22.5
4	22.1	35.6	25.6	41.2

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. Power steering conforms to SAE J1151 and emergency steering SAE J53.

Non-powered axle			
Curb turning radius with brakes	11 ft. 8 in. (3.55 m)		
without brakes	13 ft. 3 in. (4.04 m)		
Bucket clearance circle with brakes	31 ft. 8 in. (9.64 m)		
without brakes	34 ft. 9 in. (10.60 m)		
Steering wheel turns, stop to stop	2.2 to 2.9		
Mechanical-front-wheel drive			
Curb turning radius with brakes	11 ft. 5 in. (3.49 m)		
without brakes	13 ft. 6 in. (4.11 m)		
Bucket clearance circle, with brakes	29 ft. 7 in. (9.02 m)		
without brakes	33 ft. 8 in. (10.26 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)	19,600 lb. (8800 kg)
Rear	51,000 lb. (23,100 kg)	68,000 lb. (30,800 kg)	15,960 lb. (7200 kg)

HYDRAULICS

System	closed center
Pressure, main relief	2755 psi (19,000 kPa)
Pump	radial pistons
Flow at 2200 rpm	35 gpm (133 L/min)
Filter, return oil	10 micron, spin-on replaceable element

TIRES

Rear	Front
17.5-24, 10 PR, R4	11L-15, 10 PR, F3
19.5L-24, 10 PR, R4	11L-16, 12 PR, F3
With mechanical-front-wheel drive	
21L-24, 10 PR, R4	12.00-16.5, 8 PR, lug tread
18.4-28, 12 PR, R4	14-17.5, 8 PR

CAPACITIES

	U.S.
Fuel tank	34 gal. (129 L)
Engine coolant	17 qt. (16 L)
Engine oil including filter	9 qt. (8.5 L)
Torque converter and reverser system	14 qt. (13 L)
Hydraulic system	21 gal. (79 L)
Transaxle with MFWD	6 gal. (23 L)

OPERATING WEIGHTS

	SAE
410D	15,600 lb. (7075 kg)
cab adds	500 lb. (227 kg)
mechanical front-wheel drive adds	275 lb. (125 kg)
extendable dipperstick with required counterweight adds	1063 lb. (482 kg)
optional front counterweight adds	250 lb. (113 kg)
backhoe bucket coupler adds	200 lb. (91 kg)
See backhoe and loader performance data for bucket weights	



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 rides in a vertical position. Provides superior weight distribution for smooth transport and optimum performance when 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

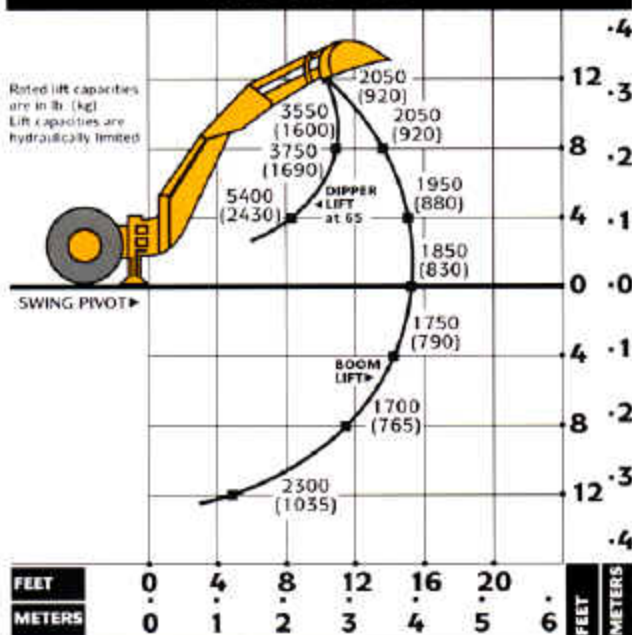
The industry standard. Large entrance doors on both sides allow convenient entrance and exit. Open within machine width so they aren't susceptible to damage. Electronic monitor provides audible and visible warnings. 4700 sq. in. (30 322 cm²) of window area opens for excellent ventilation.



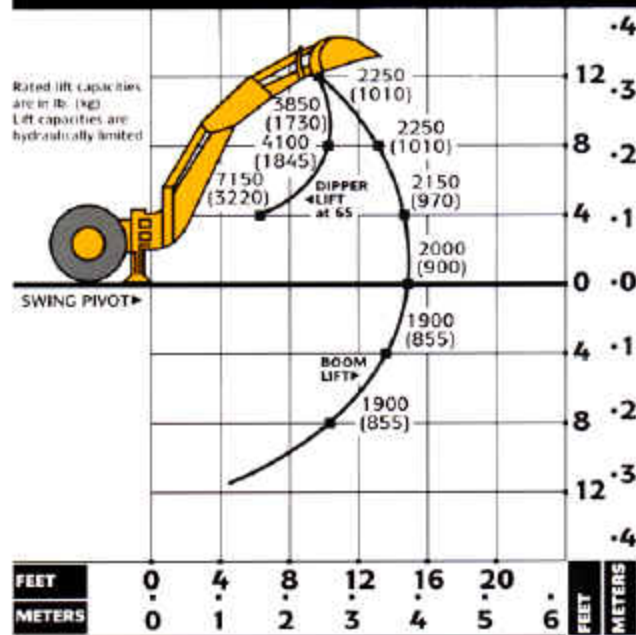
LOADER DESIGN

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

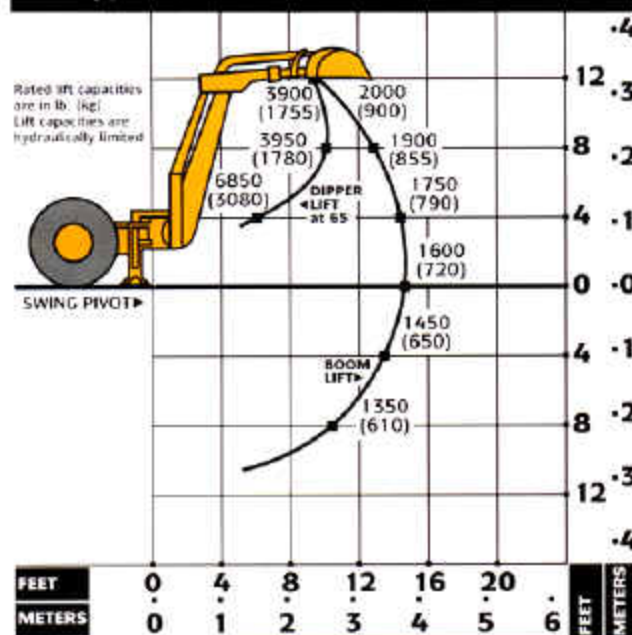
LIFT CAPACITY Backhoe with long dipperstick. Based on SAE J31.



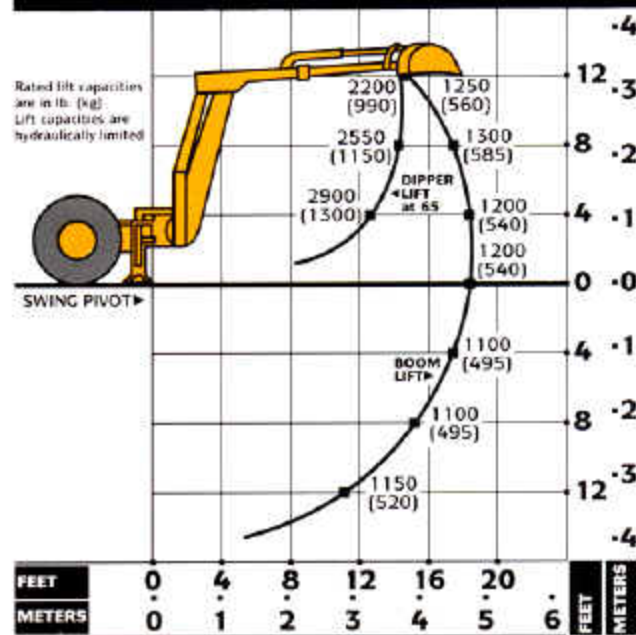
LIFT CAPACITY Backhoe with short dipperstick. Based on SAE J31.



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



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



LOADER BUCKETS

Loader:	Width		Heaped Capacity		Weight	
	in.	(mm)	Cu. Yd.	(m ³)	lb.	(kg)
General purpose	92	(2340)	1.0	(0.76)	760	(345)
	92	(2340)	1.3	(1.0)	796	(361)
Long lip	89	(2270)	1.25	(0.96)	750	(340)
Multipurpose	92	(2340)	1.25	(0.96)	1560	(708)

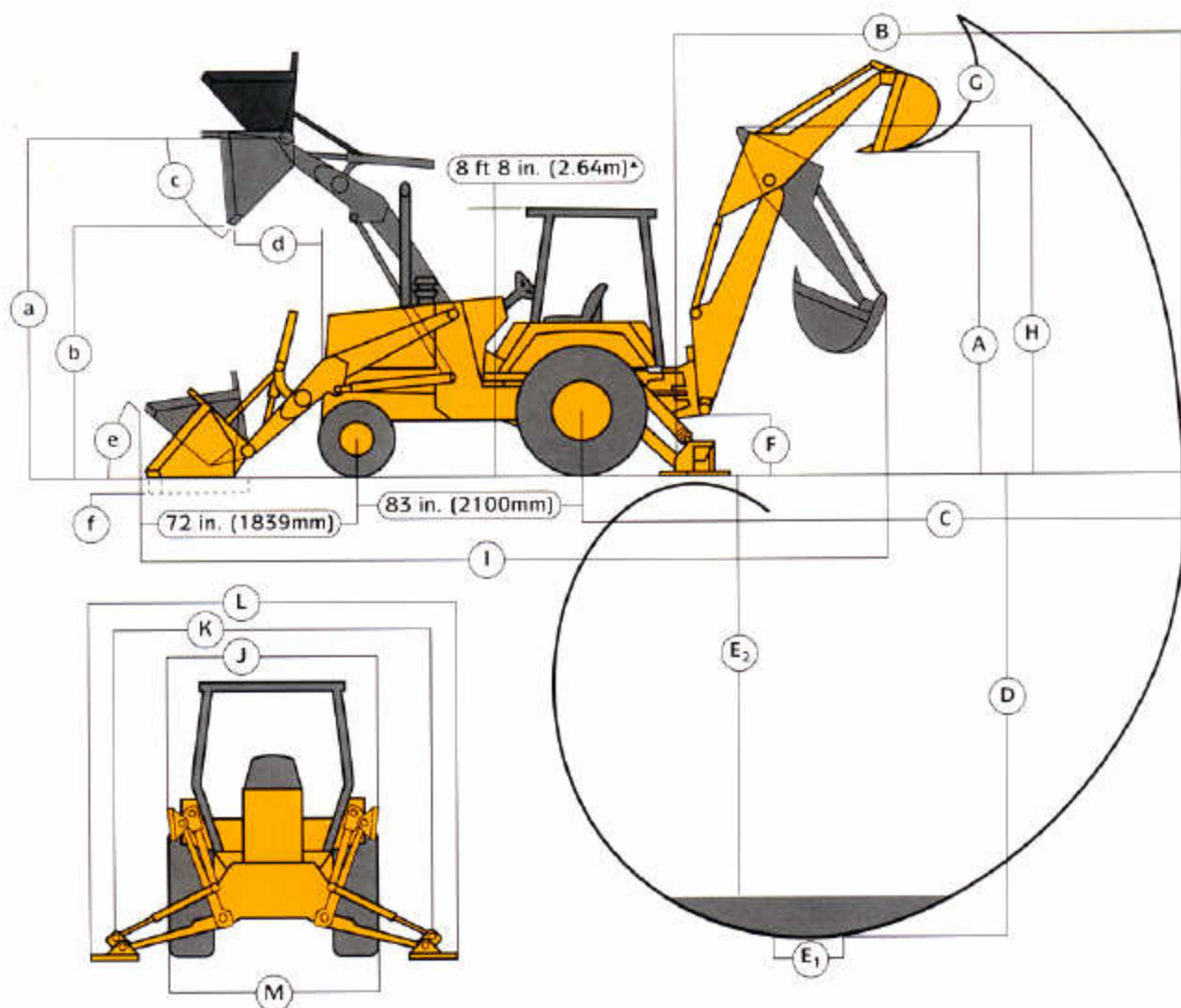
BACKHOE BUCKETS

	Width		Capacity		Weight	
	in.	(mm)	cu. ft.	(m ³)	lb.	(kg)
Standard-duty	12	(305)	2.5	(0.07)	244	(111)
	16	(406)	3.6	(0.10)	268	(122)
	18	(457)	5.1	(0.14)	322	(146)
	24	(610)	7.5	(0.21)	370	(168)
	30	(762)	10.0	(0.28)	410	(186)
Heavy-duty	36	(914)	9.9	(0.28)	430	(195)
	36	(914)	14.5	(0.41)	556	(252)
	12	(305)	2.5	(0.07)	258	(117)
	18	(457)	5.1	(0.14)	334	(151)
Extra heavy-duty	24	(610)	7.5	(0.21)	396	(180)
	24	(610)	8.8	(0.25)	476	(216)
	30	(762)	10.0	(0.28)	444	(201)
	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

	w/1.0 cu. yd. (0.76 m ³) Standard Bucket	w/1.25 cu. yd. (0.95 m ³) Long Lip Bucket	w/1.3 cu. yd. (1.0 m ³) Bucket (optional)
Operator control	single lever	single lever	single lever
Breakout force	10,000 lb. (44.5 kN)	9000 lb. (40 kN)	9700 lb. (43.2 kN)
Lifting capacity, full height	6700 lb. (3040 kg)	6500 lb. (2950 kg)	6600 lb. (2990 kg)
a) Height to bucket hinge pin, max.	11 ft. (3.35 m)	11 ft. (3.35 m)	11 ft. (3.35 m)
b) Dump clearance, bucket at 45 degrees	9 ft. (2.74 m)	8 ft. 5 in. (2.58 m)	8 ft. 9 in. (2.67 m)
c) Bucket dump angle, max.	45 degrees	45 degrees	45 degree
d) Reach at full height, bucket at 45 degrees	28 in. (711 mm)	34 in. (868 mm)	30 in. (762 mm)
e) Rollback at ground level	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)
Raising time to full height	4.5 sec.	4.5 sec.	4.5 sec.
Bucket dump time	1.0 sec.	1.0 sec.	1.0 sec.
Bucket lowering time (power down)	3.0 sec.	3.0 sec.	3.0 sec.

DIMENSIONS



▲ ROPS and cab

Key:

A. Loading height, truck loading position	11 ft. 10 in. (3.61 m)
B. Reach from center of swing mast	18 ft. 5 in. (5.61 m)
C. Reach from center of rear axle	22 ft. 2 in. (6.76 m)
D. Maximum digging depth	15 ft. 4 in. (4.67 m)
E. Digging depth (SAE):	
(1) 2-ft. (610 mm) flat bottom	15 ft. 3 in. (4.65 m)
(2) 8-ft. (2440 mm) flat bottom	14 ft. 2 in. (4.32 m)
F. Ground clearance, minimum	12 in. (305 mm)
G. Bucket rotation	160 or 180 degrees
H. Transport height	11 ft. 5 in. (3.48 m)
I. Overall length, transport	23 ft. 5 in. (7.14 m)
J. Stabilizer width—transport	7 ft. 8 in. (2.34 m)
K. Stabilizer spread—operating	9 ft. 10 in. (3.00 m)
L. Stabilizer overall width—operating	11 ft. 4 in. (3.45 m)
M. Width over tires	85 in. (2.15 m)

Backhoe* w/Long Dipperstick

11 ft. 10 in. (3.61 m)
18 ft. 5 in. (5.61 m)
22 ft. 2 in. (6.76 m)
15 ft. 4 in. (4.67 m)
15 ft. 3 in. (4.65 m)
14 ft. 2 in. (4.32 m)
12 in. (305 mm)
160 or 180 degrees
11 ft. 5 in. (3.48 m)
23 ft. 5 in. (7.14 m)
7 ft. 8 in. (2.34 m)
9 ft. 10 in. (3.00 m)
11 ft. 4 in. (3.45 m)
85 in. (2.15 m)

Backhoe* w/Short Dipperstick

11 ft. 1 in. (3.38 m)
17 ft. 9 in. (5.42 m)
21 ft. 6 in. (6.55 m)
14 ft. 8 in. (4.47 m)
14 ft. 6 in. (4.42 m)
13 ft. 5 in. (4.09 m)
12 in. (305 mm)
160 or 180 degrees
11 ft. 5 in. (3.48 m)
22 ft. 11 in. (6.99 m)
7 ft. 8 in. (2.34 m)
9 ft. 10 in. (3.00 m)
11 ft. 4 in. (3.45 m)
85 in. (2.15 m)

Extendable Dipperstick

Retracted	Extended
11 ft. 6 in. (3.51 m)	13 ft. 11 in. (4.24 m)
17 ft. 9 in. (5.42 m)	21 ft. 5 in. (6.53 m)
21 ft. 6 in. (6.55 m)	25 ft. 2 in. (7.67 m)
14 ft. 8 in. (4.47 m)	18 ft. 5 in. (5.61 m)
14 ft. 6 in. (4.42 m)	18 ft. 4 in. (5.59 m)
13 ft. 5 in. (4.09 m)	17 ft. 6 in. (5.34 m)
12 in. (305 mm)	12 in. (305 mm)
160 or 180 degrees	160 or 180 degrees
11 ft. 8 in. (3.56 m)	11 ft. 8 in. (3.56 m)
23 ft. (7.01 m)	23 ft. (7.01 m)
7 ft. 8 in. (2.34 m)	7 ft. 8 in. (2.34 m)
9 ft. 10 in. (3.00 m)	9 ft. 10 in. (3.00 m)
11 ft. 4 in. (3.45 m)	11 ft. 4 in. (3.45 m)
85 in. (2.15 m)	85 in. (2.15 m)

BACKHOE PERFORMANCE

Digging force, bucket cylinder (power dig position)	11,700 lb. (52 kN)	11,700 lb. (52 kN)	11,700 lb. (52 kN)	11,700 lb. (52 kN)
Digging force, crowd cylinder	6300 lb. (28 kN)	6800 lb. (30.3 kN)	6800 lb. (30.3 kN)	4600 lb. (20.5 kN)
Swing arc	180 degrees	180 degrees	180 degrees	180 degrees
Operator control	Two levers	Two levers	Right foot treadle	Right foot treadle
Bucket positions	9 or 18 deg. rollback	12 or 21 deg. rollback	8 or 17 deg. rollback	12 or 22 deg. rollback
Stabilizer angle rearward	14.5 degrees	14.5 degrees	14.5 degrees	14.5 degrees
Lifting capacity, maximum, boom at 65 deg.	4400 lb. (1980 kg)	4800 lb. (2160 kg)	4600 lb. (2070 kg)	2900 lb. (1310 kg)
Leveling angle	14 degrees	14 degrees	14 degrees	14 degrees

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

ADDITIONAL STANDARD EQUIPMENT

Engine:

- Enclosed safety fan guard
- Conforms to SAE J130B
- Engine coolant to -34°F (-37°C)
- Oil-to-water engine oil cooler
- Under hood muffler with vertical curved end exhaust stack

Power Train:

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

- Electric shuttle control
- Electric clutch cutoff
- Differential lock with padded pedal

Backhoe:

- Dirt foot stabilizer pad
- Independent side console mounted stabilizer control
- Patented high penetration, high wear resistant bucket tooth
- 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
- Headliner
- Horn

Interior mounted rearview mirror

- Conforms to SAE J985
- Key start switch with electric fuel shutoff
- Lights, halogen driving/working
- 35,200 candlepower (375 737 lux) each
- Two front, two rear
- Stop and tail (two rear)
- Flashing and turn signals, two front, two rear
- Conforms to SAE J99
- Modular design ROPS/FOPS canopy
- Conforms to SAE J1040
- Molded floor mat
- Non-suspension seat
- Flip up armrests
- Conforms to SAE J899
- Park brake indicator
- Rear reflectors
- Slip resistant safety steps and ergonomically located handrails
- Conforms to SAE J185
- 2-in. (51 mm) seat belt with retractors
- Conforms to SAE J386
- Tachometer/hourmeter

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
- Front counterweight
- 750 lb. (340 kg)
- 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 isolation mounted stabilizer valve
- Two direction stabilizer anti-drift valves
- "O" ring face seal connectors

OPTIONAL OR SPECIAL EQUIPMENT

Engine:

- John Deere Model 4045T
- 4.5 liter 85 hp (63.5 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
- Wet clutch engagement

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
- Loader boom service lock*

Operator's Station:

- Cab
- Cab pressurizer
- 25-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 J1503, J1555D
- Fresh air pre-cleaner
- 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

- Lateral seat slides*
- Radio
- 3-in. (76 mm) seat belt

Overall Vehicle:

- Dual batteries
- Fan blast dust shields
- Fire extinguisher
- Rigid supported front bumper
- Front counterweight
- 250 lb. (113 kg)
- High-flotation 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.

If they're stumped, a phone call to DTAC (Dealer Technical Assistance Center) puts them in touch with a staff of pros at the factory who help them find a solution quickly.

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 com-

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 5000 feet (1500 m) altitude. With optional altitude compensating turbo-charger 10,000 feet (3050 m). Gross power is without cooling fan.

mitment in dedicated, skilled and highly trained and motivated personnel in each and every department at the dealership.

But what sets John Deere dealers apart from all the rest is something more, a factor somewhat difficult to measure... a caring attitude, and a sincere desire to be the best at meeting the needs of each individual customer.

John Deere Finance Plans—Whether you rent, lease or buy John Deere equipment, your dealer can explain the John Deere options available. One-stop options that let you free up operating capital, keep other lines of credit open.

Best warranty protection—All John Deere construction equipment has a 6-month warranty on the entire machine and a full 24-month warranty on the power train. The SECURE® program, a John Deere service product, is offered for repair coverage after warranty concludes. Full machine or power train coverage is available for a variety of time periods to meet your needs. Your dealer will explain the details.

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 17.5L-24, 10 PR, R4 rear tires, 11L-15, 10 PR F3 front tires, 1.0 cu. yd. (0.76 m³) loader bucket, 24 in. x 7.5 cu. ft. (610 mm x 0.21 m³) backhoe bucket.

