



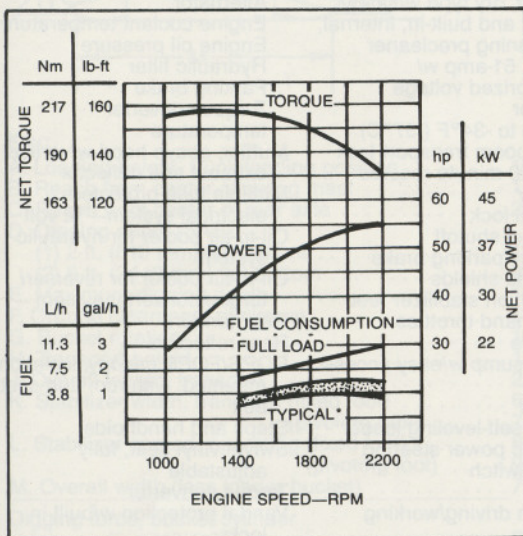
1837-1987  
**150**

## 210C BACKHOE LOADER



Model shown may include options

### ENGINE PERFORMANCE



\*Depending on operating variables

### FEATURES

- 55 SAE net hp (41 kW)
- Backhoe digging depth (SAE) 14 ft. (4.27 m)
- Unitized frame — pin-on backhoe
- Isolated engine and operator's station
- Walk-in front entry
- Designed-in quietness
- Open-center hydraulic system
- O-ring face seal hydraulic plumbing
- Weight distributed for working stability
- Self-adjusting hydraulic wet-disk brakes
- Inboard planetary final drives
- Transaxle 1st and 2nd collar shift, 3rd and 4th synchronized
- Full-power-shift reverser
- Torque converter
- Single-lever loader control
- Two-lever backhoe control
- Two-lever stabilizer control with anti-drift lock-outs
- Multi-adjustable swivel seat

- Hydrostatic power steering
  - Optional soundproofed cab w/integral ROPS/ FOPS
  - Vandal protection w/built-in locks
- ADD VERSATILITY WITH:**
- Mechanical front-wheel drive with:
    - Offset driveshaft for better ground clearance
  - Extendable dipperstick

## 210C BACKHOE LOADER SPECIFICATIONS

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 14.9-24, 6 PR, R4 rear tires; 7.50-16, 10 PR, F3 front tires, 0.88 cu. yd. (0.67 m<sup>3</sup>) loader bucket, 24-in. (610 mm) standard-duty backhoe bucket, ROPS/FOPS, full fuel tank, 175 lb. (80 kg) operator and standard equipment.

Rated Power @ 2200 rpm:	SAE	DIN 70 020
Net	55 hp (41 kW)	43 kW
Gross	58 hp (43 kW)	

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 @ 35 API gravity. No derating is required up to 6000 feet (1800 m) altitude. Gross power is without cooling fan.

### Engine: John Deere 4-239D

Type	4-stroke cycle, naturally aspirated diesel
Bore and stroke	4.19 x 4.33 in. (106.5 x 110 mm)
No. of cylinders	4
Displacement	239 cu. in. (3.917 L)
Maximum net torque @ 1200 rpm	158 lb-ft (214 Nm) (21.8 kg-m)
	20 percent torque rise
Cooling fan	Suction
Compression ratio	17.8 to 1
Lubrication	Pressure system w/full-flow filter and cooler
Main bearings	5
Air cleaner	Dry
Electrical system	12 volt
Alternator	51 amps

### Torque Converter:

Single stage, dual phase, overrunning stator, 11-in. (280 mm) diameter, stall torque ratio 2.78:1

### Reverser:

Modulated, full-power shift with multiple wet-disk clutches. Reverser operating lever at left of steering wheel.

### Transmission:

Manual shift with first and second speeds having sliding collar engagement and third and fourth speeds engaged with cone-type synchronizers. Single shift lever, floor mounted.

Travel Speeds:	Gear	Forward		Reverse	
		mph	(km/h)	mph	(km/h)
With standard 14.9-24 rear and 7.50-16 front tires	1	3.3	5.3	3.2	5.2
	2	5.6	9.0	5.5	8.9
	3	12.0	19.3	11.9	19.2
	4	21.9	35.2	21.8	35.1
With MFWD and 16.9-24 (required) rear and 12.00-16.5 front tires	1	5.4	8.7	5.3	8.5
	2	5.7	9.2	5.6	9.0
	3	12.3	19.8	12.2	19.6
	4	22.4	36.1	22.3	35.9
Final Drives		Planetary, inboard			

**Service Brakes:** Hydraulic, applied with separate pedals; hydraulically equalized when both pedals are depressed. Wet disks and facings are fully enclosed and self-adjusting.

**Secondary Brake:** Mechanical "V" groove band located on differential ring gear

### Steering: Hydrostatic power

Steering axle, regular:	
Turning radius (brake applied)	9 ft. 4 in. (8.59 m)
Clearance circle (brake applied)	27 ft. 4 in. (8.33 m)
Steering wheel turns, left to right	2.2
right to left	2.9
Axle oscillation stop to stop	22 deg.
Mechanical front-wheel drive (engaged):	
Turning radius (brake applied)	10 ft. (3.05 m)
Clearance circle (brake applied)	29 ft. (8.84 m)
Steering wheel turns, left to right	2.3
right to left	2.8
Axle oscillation stop to stop	22 deg.

### Hydraulic System: Open-center

Pressure, main relief	2500 psi (17 238 kPa) (175.8 kg/cm <sup>2</sup> )
Pump	Gear type
Flow @ 2200 rpm	24 gpm (1.51 L/s)
Filter, return oil	10 micron, steel-enclosed replaceable element

Hydraulic Cylinders:	Bore		Stroke		Rod	
	In.	(mm)	In.	(mm)	In.	(mm)
Loader boom (2)	2.76	70	30.8	782	1.77	45
Loader bucket (1)	2.76	70	28.1	715	1.75	40
Backhoe boom (1)	3.94	100	34.9	886	1.97	50
Backhoe crowd (1)	3.54	90	33.0	838	1.77	45
Backhoe bucket (1)	3.15	80	31.0	788	1.77	45
Backhoe swing (2)	3.15	80	27.4	226	1.77	45
Backhoe extendable dipper (1)	2.50	64	48.0	1220	1.25	32
Backhoe stabilizers (2)	3.54	90	15.5	394	1.77	45
Steering (1) regular axle	2.00	51	9.5	241	1.00	25
Steering (1) MFWD	2.00	51	12.6	320	1.00	25

Tires:	Front	Rear
	7.50-16, 10 PR, F3 11L-15, 8 PR, I-1A	14.9-24, 6 PR, R4 16.9-24, 6 PR, R3 17.5L-24, 8 PR, R4 16.9-24, 8 PR, R4
MFWD	12.00-16.5, 8 PR, R4	

### Wheel Treads:

Front	56 in. (1420 mm)
Rear	60 in. (1525 mm)
MFWD—Front	68 in. (1730 mm)
—Rear	62 in. (1575 mm)

Wheelbase	82.7 in. (2100 mm)
w/MFWD	83.3 in. (2116 mm)

Axle Ratings:	Static Rating	Dynamic Rating	SAE J43
Front	36,300 lb. (16 500 kg)	36,300 lb. (16 500 kg)	8700 lb. (4000 kg)
Rear	41,100 lb. (18 700 kg)	54,800 lb. (24 900 kg)	11,500 lb. (5300 kg)

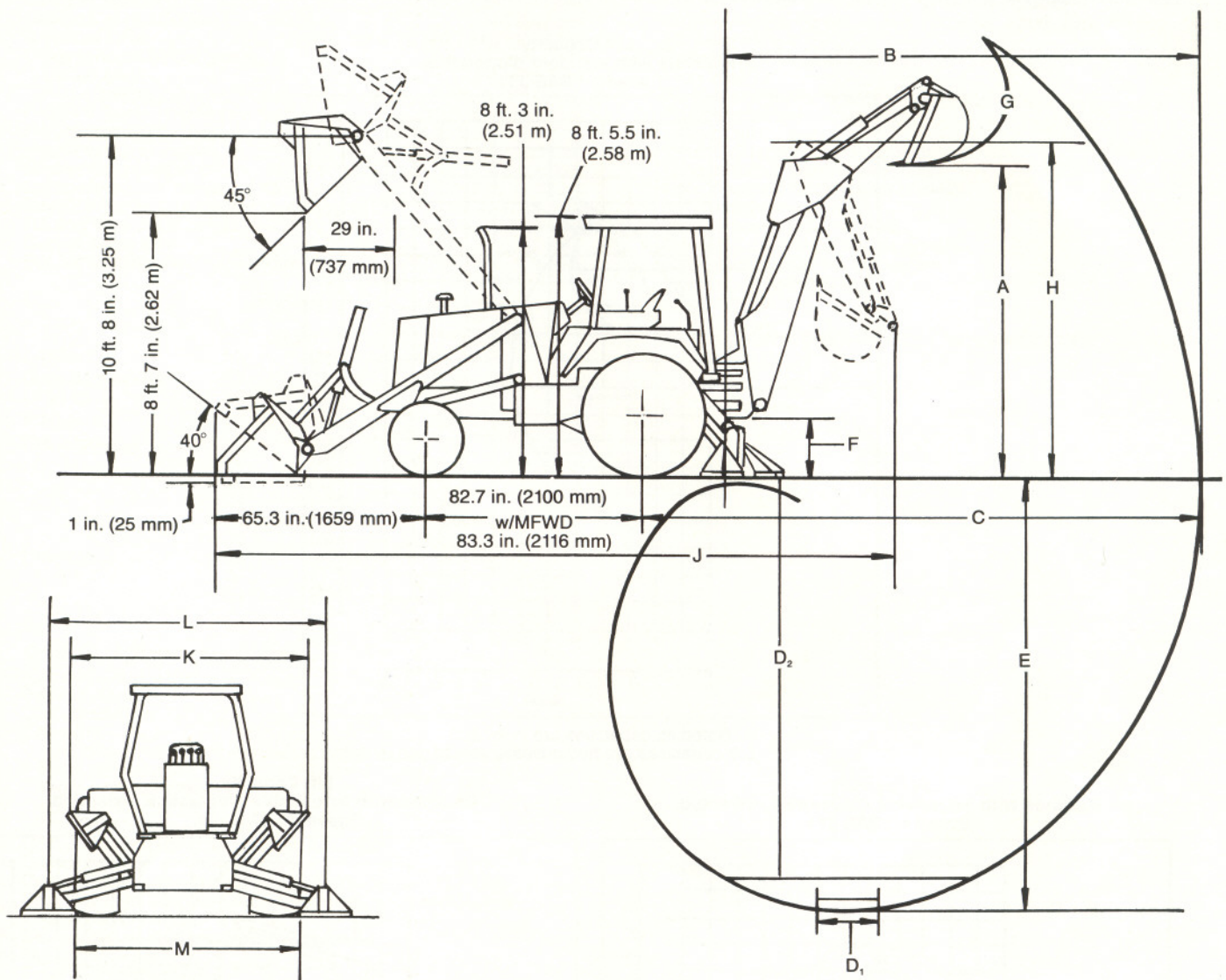
Capacities:	U.S.	Liters
Fuel tank	23 gal.	87
Engine coolant	17 qt.	16
Engine oil including filter	9 qt.	8.5
Torque converter and reverser system	8 qt.	7
Hydraulic system	16 gal.	60

### Additional Standard Equipment:

Air cleaner restriction indicator	Monitor for:
Air cleaner, dry type w/safety element and built-in, internal, self-cleaning precleaner	Alternator
Alternator, 51-amp w/transistorized voltage regulator	Engine coolant temperature
Antifreeze to -34°F (-37°C)	Engine oil pressure
Backhoe boom transport lock	Hydraulic filter
Battery, 110-minute reserve capacity	Parking brake
Differential lock	Torque converter temperature
Electric fuel shutoff	Muffler, above hood w/vertical exhaust and deflector
Emergency/parking brake	Multiple fuse protected electrical system—12 volt
Engine side shields	Oil-to-air cooler for hydraulic system
Fixed position stabilizer feet	Oil-to-air cooler for reverser/torque converter system
Foot and hand throttles	Rear fenders
Fuel gauge	Rear reflectors
Fuel tank sump w/easy access drain	ROPS/FOPS canopy, isolation mounted, with roof and seat belt
Hourmeter	Steps and handholds
Hydraulic self-leveling loader	Swivel vinyl seat, fully adjustable
Hydrostatic power steering	Torque converter
Key start switch	Vandal protection w/built-in locks
Lights:	
Halogen driving/working lights	
Taillight	
Loader bucket level indicator	

**SAE Operating Weight** 10,500 lb. (4723 kg)

## 210C BACKHOE LOADER SPECIFICATIONS AND DIMENSIONS



### Key:

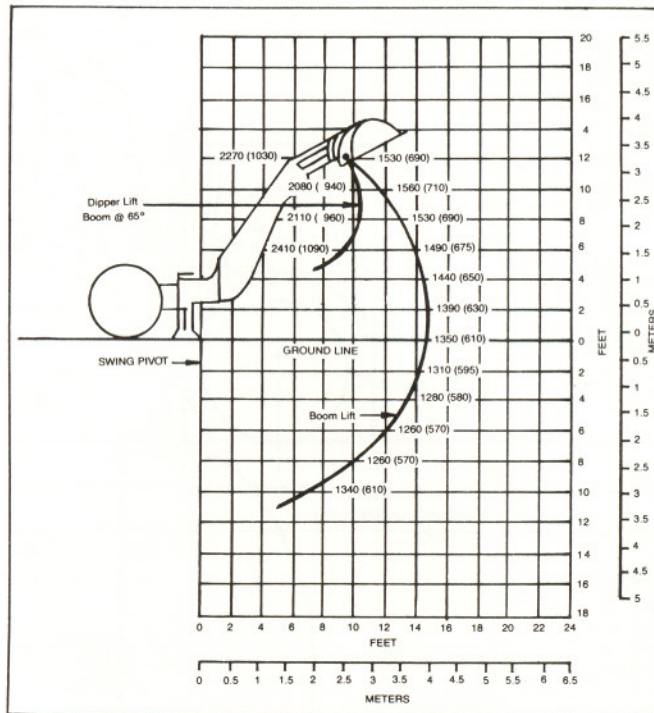
	Backhoe	Extendable Dipperstick Retracted	Extended
A. Loading height, truck loading position	10 ft. 5 in. (3.18 m)	10 ft. 8 in. (3.25 m)	12 ft. 4 in. (3.76 m)
B. Reach from center of swing mast	17 ft. 3 in. (5.25 m)	17 ft. 3 in. (5.26 m)	20 ft. 11 in. (6.38 m)
C. Reach from center of rear axle	20 ft. 6 in. (6.25 m)	20 ft. 6 in. (6.25 m)	24 ft. 2 in. (7.37 m)
D. Digging depth (SAE):			
(1) 2-ft. (610 mm) flat bottom	13 ft. 9 in. (4.19 m)	13 ft. 9 in. (4.19 m)	17 ft. 8 in. (5.39 m)
(2) 8-ft. (2440 mm) flat bottom	12 ft. 7 in. (3.84 m)	12 ft. 7 in. (3.84 m)	16 ft. 9 in. (5.11 m)
E. Maximum digging depth	14 ft. (4.27 m)	14 ft. (4.27 m)	17 ft. 9 in. (5.41 m)
F. Ground clearance, minimum	11 in. (282 mm)	11 in. (282 mm)	11 in. (282 mm)
G. Bucket rotation	160/180 degrees	160/179 degrees	160/179 degrees
H. Transport height	11 ft. 5 in. (3.48 m)	11 ft. 5 in. (3.48 m)	11 ft. 5 in. (3.48 m)
J. Overall length, transport	23 ft. (7.01 m)	23 ft. 3 in. (7.09 m)	23 ft. 3 in. (7.09 m)
K. Stabilizer width, transport (fixed foot)	6 ft. 7 in. (2.00 m)	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)	7 ft. 4 in. (2.23 m)
L. Stabilizer spread, operating (fixed foot)	8 ft. 5 in. (2.57 m)	8 ft. 5 in. (2.57 m)	8 ft. 5 in. (2.57 m)
(pivoting foot)	9 ft. 1 in. (2.77 m)	9 ft. 1 in. (2.77 m)	9 ft. 1 in. (2.77 m)
M. Overall width (less loader bucket)	75 in. (1905 mm)	75 in. (1905 mm)	75 in. (1905 mm)
Digging force, bucket cylinder (power dig position)	9600 lb. (42.7 kN) (4355 kg)	9610 lb. (42.7 kN) (4359 kg)	9600 lb. (42.7 kN) (4355 kg)
Digging force, crowd cylinder	5200 lb. (23.1 kN) (2360 kg)	5200 lb. (23.1 kN) (2360 kg)	3510 lb. (15.6 kN) (1590 kg)
Swing arc	180 degrees	180 degrees	180 degrees
Operator control	Two levers	Right foot treadle	Right foot treadle
Bucket positions	21 or 30 deg. rollback	19 or 28 deg. rollback	22 or 32 deg. rollback
Stabilizer angle rearward	12 degrees	12 degrees	12 degrees
Lifting capacity, maximum, boom @ 65°	2400 lb. (1090 kg)	2200 lb. (1000 kg)	1370 lb. (620 kg)
Leveling angle—(fixed foot)	8.5 degrees	8.5 degrees	8.5 degrees
(pivoting foot)	11 degrees	11 degrees	11 degrees

Note: Backhoe specifications are with 24-in. (610 mm) standard bucket

## 210C BACKHOE LOADER LIFTING CAPACITIES

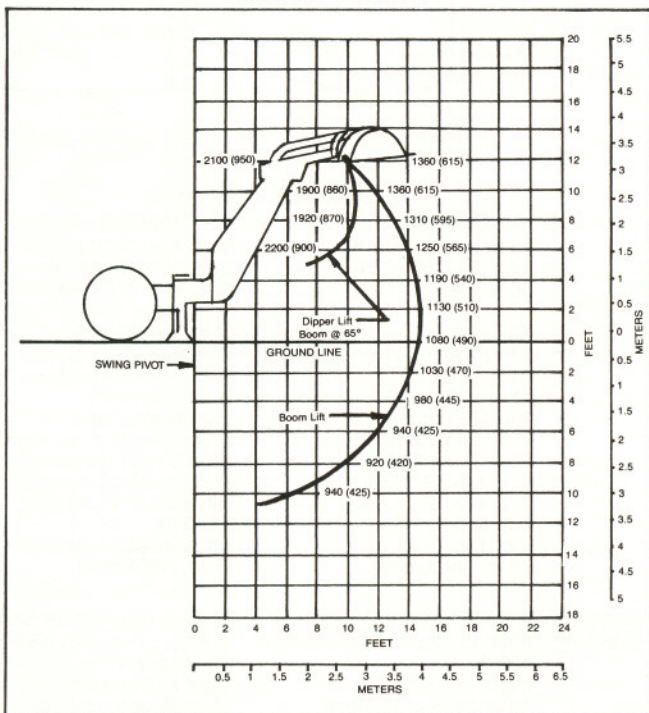
Lifting Capacity Ratings made from bucket hinge pin, loader bucket and stabilizer on firm, level ground. Lifting capacities are 87 percent of the maximum lift over any point on the swing arc and do not exceed 75 percent of the tipping load. Angle between boom and ground at 65 degrees. Machine equipped with 24-in. (610 mm) trenching bucket, standard or optional dipperstick (as indicated below) and standard equipment.

**Lift Capacity**  
Backhoe with standard dipperstick.  
Based on SAE J31.



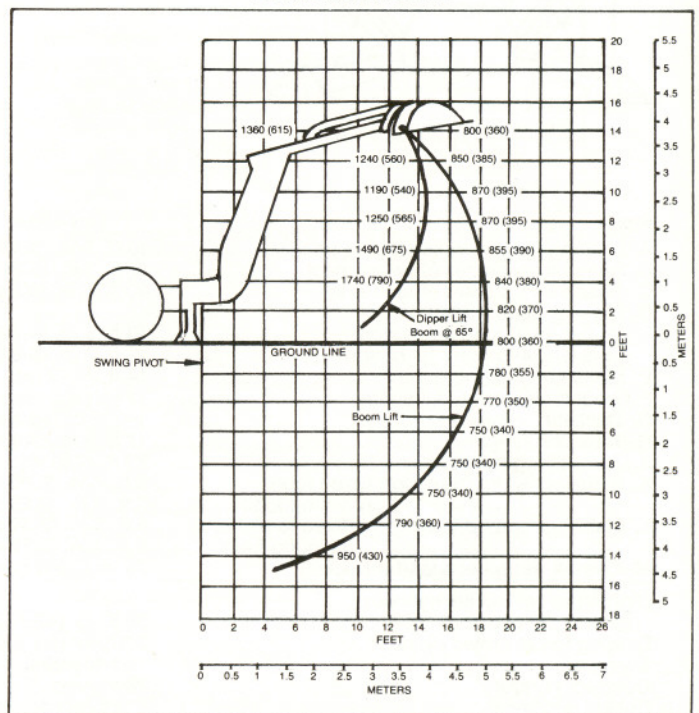
Rated lift capacities are in lb. (kg)  
Lift capacities are hydraulically limited.

**Lift Capacity**  
Backhoe with extendable dipperstick, retracted.  
Based on SAE J31.



Rated lift capacities are in lb. (kg)  
Lift capacities are hydraulically limited.

**Lift Capacity**  
Backhoe with extendable dipperstick, extended.  
Based on SAE J31.



Rated lift capacities are in lb. (kg)  
Lift capacities are hydraulically limited.

## 210C BACKHOE LOADER

### LOADER:

Operator control	Single lever
Rollback at ground level	40 degrees
Breakout force	6800 lb. (30.1 kN) (3085 kg)
Digging depth below ground, bucket level	1 in. (25 mm)
Lifting capacity, full height	4700 lb. (2140 kg)
Height to bucket hinge pin, max.	10 ft. 8 in. (3.25 m)
Height to top of canopy	8 ft. 5.5 in. (2.58 m)
Height to top of muffler	8 ft. 3 in. (2.51 m)
Bucket dump angle, max.	45 degrees
Dump clearance, bucket @ 45 degrees	8 ft. 7 in. (2.62 m)
Reach at full height, bucket @ 45 degrees	29 in. (737 mm)
Raising time to full height	4.8 sec.
Bucket dump time	1.1 sec.
Bucket lowering time (power down)	2.8 sec.

### BUCKETS

Loader:	Width		Heaped Capacity	
	In.	(mm)	Cu. Yd.	(m <sup>3</sup> )
General purpose	81	(2057)	0.88	(0.67)
Long lip	89	(2260)	1.0	(0.76)
Backhoe:			Cu. Ft.	(m <sup>3</sup> )
Standard-duty	12	(305)	2.5	0.07
	16	(407)	3.6	0.10
	18	(457)	4.1	0.12
	24	(610)	6.0	0.17
	30	(762)	7.9	0.22
Heavy-duty	36	(914)	9.9	0.28
	18	(457)	4.1	0.12
	24	(610)	6.0	0.17
	24	(610)	7.5	0.21

### Optional or Special Equipment:

- Automatic return-to-dig
- Backup alarm
- Cab pressurizer
- Cab with:
  - Fabric-covered swivel seat, suspension or non-suspension
  - Front defroster fan
  - Front and rear wipers
  - Integral ROPS/FOPS
  - Standard heater—19,000 Btu/hr (5.6 kW)
- Cold-weather starting aid, remote mounted
- Deluxe cab interior trim package
- Deluxe heater w/fresh air intake—40,000 Btu/hr (11.7 kW)
- Economy seat, vinyl covered, suspension or rigid mounted
- Engine coolant heater
- Extendable dipperstick for backhoe
- Fire extinguisher
- Front counterweight
- Heavy counterweighted front axle
- Heavy-duty batteries
- Horn
- Instrument panel vandal cover
- Lights:
  - Front rear turn signal lights
  - Rear brake lights
  - Rear halogen work lights
  - Rotating beacon light
- Mechanical front-wheel drive
- Rear defroster fan
- Rearview mirror, inside mounted, curved, heavy-duty
- Rear wheel spacers for tire chain clearance
- Reversible stabilizer pads
- Tachometer/hourmeter
- Three-point hitch w/single or four function hydraulics
- SMV emblem
- Stabilizer w/pivoting feet
- 3-in. (76 mm) seat belt
- Three- or four-lever, pedal-swing backhoe controls
- Toolbox

### Additional Available Equipment:\*

- Auxiliary bolt-on cutting edge for loader buckets
- Auxiliary hydraulic valves and circuit for loader and backhoe
- Backhoe lift eye
- Bolt-on teeth for loader bucket
- Floor mat
- Front counterweight, extra (side mounted)
- Front windshield and door kit
- Grille guard
- Lateral slides for operator's seat
- Loader bucket chain hooks, outer
- Light materials/snow loader buckets
- MFWD drive shaft guard
- Multipurpose loader buckets
- Quick-hitch backhoe bucket system
- Quick-hitch loader bucket system
- Radio or radio cassette
- Special paint

\* See your John Deere dealer for further information