## 210C BACKHOE LOADER

**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

## ENGINE PERFORMANCE

<table>
<thead>
<tr>
<th>ENGINE SPEED—RPM</th>
<th>NET TORQUE</th>
<th>NET POWER</th>
<th>FUEL CONSUMPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>120</td>
<td>30</td>
<td>3.8</td>
</tr>
<tr>
<td>1400</td>
<td>140</td>
<td>40</td>
<td>2.5</td>
</tr>
<tr>
<td>1800</td>
<td>160</td>
<td>50</td>
<td>2.0</td>
</tr>
<tr>
<td>2200</td>
<td>180</td>
<td>60</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Depending on operating variables*
**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, 3.88 cu. yd. (0.07 m³) loader bucket, 24-in. (610 mm) standard-duty backhoe bucket, ROPS/FOPS, full fuel tank, 175 lb. (80 kg) operator and standard equipment.

### Engine:
- **Type:** John Deere 4-239D
- **Compression ratio:** 17.8:1
- **Bore and stroke:** 4.19 x 4.33 in. (106.5 x 110 mm)
- **Displacement:** 239 cu. in. (3.917 L)
- **Rated Power @ 2200 rpm:** SAE 55 hp (41 kW), DIN 70 020 43 kW

### Transmission:
- **Manual shift with first and second speeds having sliding collar synchronizers.**
- **Single shift lever, floor mounted.**
- **Modulated, full-power shift with multiple wet-disk clutches.**
- **Reverser:** Single stage, dual phase, overrunning stator, 11-in. (280 mm) diameter, stall torque ratio 2.78:1

### Drive Systems:
- **Axle oscillation stop to stop:** 22 deg.
- **Axle oscillation stop to stop:** 22 deg.
- **Key start switch adjustable**
- **34°F (-37°G) temperature**

### Electrical System:
- **12 volt**
- **DIN 70020**
- **7000 lb. (3175 kg)**
- **8700 lb. (3950 kg)**
- **110-minute reserve**
- **Parking brake**
- **Torque converter**
- **Operating Weight.**

### Capacities:
- **Air cleaner restriction indicator Monitor for:**
- **Engine coolant temperature**
- **Parking brake**
- **Torque converter**
- **U.S.**
- **Liners:**
- **Engine oil including filter**
- **Torque converter and reverser system**
- **Hydraulic system**
- **Sae J43**
- **DIN 70020**
- **7000 lb. (3175 kg)**
- **8700 lb. (3950 kg)**
- **110-minute reserve**
- **Parking brake**
- **Torque converter**
- **Operating Weight.**

### Tires:
- **Front:** 14.9-24, 6 PR, R4
- **Rear:** 16.9-24, 6 PR, R3

### Specifications and Design:
- **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.

### Hydraulic System:
- **Open-center**
- **Pressure, main relief:** 2500 psi (17 238 kPa) (175.8 kg/cm²)

### Fluid Capacities:
<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity U.S.</th>
<th>Capacity Liters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel tank</td>
<td>23 gal.</td>
<td>87</td>
</tr>
<tr>
<td>Engine coolant</td>
<td>17 qt.</td>
<td>51</td>
</tr>
<tr>
<td>Engine oil</td>
<td>9 qt.</td>
<td>8.5</td>
</tr>
<tr>
<td>Torque converter</td>
<td>8 qt.</td>
<td>7</td>
</tr>
<tr>
<td>Hydraulic system</td>
<td>16 gal.</td>
<td>60</td>
</tr>
</tbody>
</table>

### Additional Standard Equipment:
- **Air cleaner restriction indicator Monitor for:**
- **Alternator**
- **Engine oil pressure**
- **Hydraulic filter**
- **Torque converter**
- **Muffler, above hood w/vertical exhaust and deflector**
- **Multiple fuse protected**
- **Electrical system—12 volt**
- **Oil-to-air cooler for hydraulic system**
- **Oil-to-air cooler for reverser/torque converter system**
- **Rear fenders**
- **Rear reflectors**
- **Swivel air seat, fully adjustable**
- **Torque converter**
- **Vandal protection w/built-in locks**

### Backhoe Stabilizers:
- **Backhoe extendable dipper (1):** 2.50 ft (64.0 cm)
- **Backhoe stabilizers (2):** 3.54 ft (105.5 cm)

### Final Drives:
- **Planetary, inboard**

### 210C BACKHOE LOADER SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loader boom</td>
<td>2.76 ft</td>
<td>70</td>
</tr>
<tr>
<td>Loader bucket (1)</td>
<td>2.76 ft</td>
<td>70</td>
</tr>
<tr>
<td>Backhoe boom (1)</td>
<td>3.94 ft</td>
<td>100</td>
</tr>
<tr>
<td>Backhoe crowd (1)</td>
<td>3.54 ft</td>
<td>90</td>
</tr>
<tr>
<td>Backhoe bucket (1)</td>
<td>3.15 ft</td>
<td>80</td>
</tr>
<tr>
<td>Backhoe swing (2)</td>
<td>3.15 ft</td>
<td>80</td>
</tr>
<tr>
<td>Backhoe extendable dipper (1)</td>
<td>2.50 ft</td>
<td>64</td>
</tr>
<tr>
<td>Backhoe stabilizers (2)</td>
<td>3.54 ft</td>
<td>90</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tires:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front</td>
<td>7.50-16</td>
<td>10 PR, F3</td>
</tr>
<tr>
<td>Rear</td>
<td>11L-15</td>
<td>8 PR, I-1A</td>
</tr>
<tr>
<td>MFWD—Front</td>
<td>68 in.</td>
<td>(1730 mm)</td>
</tr>
<tr>
<td>—Rear</td>
<td>62 in.</td>
<td>(1575 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Brakes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Brake</td>
<td>Mechanical &quot;V&quot; groove band located on differential ring gear</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steering axle, regular</td>
<td>9 ft 4 in. (8.59 m)</td>
<td></td>
</tr>
<tr>
<td>Clearance circle (brake applied)</td>
<td>27 ft 4 in. (8.33 m)</td>
<td></td>
</tr>
<tr>
<td>Steering wheel turns, left to right</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Right to left</td>
<td>2.9</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic System</td>
<td>Open-center</td>
<td></td>
</tr>
<tr>
<td>Pressure, main relief</td>
<td>2500 psi (17 238 kPa) (175.8 kg/cm²)</td>
<td></td>
</tr>
<tr>
<td>Pump</td>
<td>Gear type</td>
<td></td>
</tr>
<tr>
<td>Flow @ 2200 rpm</td>
<td>24 gpm (1.51 L/s)</td>
<td></td>
</tr>
<tr>
<td>Filter, return oil</td>
<td>10 micron, steel-enclosed replaceable element</td>
<td></td>
</tr>
</tbody>
</table>
210C BACKHOE LOADER SPECIFICATIONS AND DIMENSIONS

Key:
A. Loading height, truck loading position ........................................ 10 ft. 5 in. (3.18 m)
B. Reach from center of swing mast .................................................. 17 ft. 3 in. (5.25 m)
C. Reach from center of rear axle ...................................................... 20 ft. 6 in. (6.25 m)
D. Digging depth (SAE):
   (1) 2-ft. (610 mm) flat bottom ....................................................... 13 ft. 9 in. (4.19 m)
   (2) 8-ft. (2440 mm) flat bottom ...................................................... 12 ft. 7 in. (3.84 m)
E. Maximum digging depth ................................................................. 14 ft. (4.27 m)
F. Ground clearance, minimum ........................................................... 11 in. (282 mm)
G. Bucket rotation ............................................................................. 160/180 degrees
H. Transport height ............................................................................ 11 ft. 5 in. (3.48 m)
J. Overall length, transport ................................................................. 23 ft. (7.01 m)
K. Stabilizer width, transport (fixed foot) ........................................... 6 ft. 7 in. (2.00 m)
   (pivoting foot) .............................................................................. 7 ft. 4 in. (2.23 m)
L. Stabilizer spread, operating (fixed foot) .......................................... 8 ft. 5 in. (2.57 m)
   (pivoting foot) .............................................................................. 9 ft. 1 in. (2.77 m)
M. Overall width (less loader bucket) .................................................. 75 in. (1905 mm)

Backhoe

Digging force, bucket cylinder (power dig position) .................................. 9600 lb. (42.7 kN) (4355 kg)
Digging force, crowd cylinder ................................................................ 5200 lb. (23.1 kN) (2360 kg)
Swing arc .............................................................................................. 180 degrees
Operator control .................................................................................. Two levers
Bucket positions .................................................................................... 21 or 30 deg. rollback
Stabilizer angle rearward ....................................................................... 12 degrees
Lifting capacity, maximum, boom @ 85° .............................................. 2400 lb. (1090 kg)
Leveling angle—(fixed foot) ................................................................ 8.5 degrees
   (pivoting foot) .............................................................................. 11 degrees

Extended Dipperstick

Retracted
10 ft. 8 in. (3.25 m)
17 ft. 3 in. (5.25 m)
20 ft. 6 in. (6.25 m)
19 ft. 9 in. (5.41 m)
14 ft. (4.27 m)
11 in. (282 mm)
160/179 degrees
11 ft. 5 in. (3.48 m)
23 ft. 3 in. (7.01 m)
6 ft. 7 in. (2.00 m)
7 ft. 4 in. (2.23 m)
8 ft. 5 in. (2.57 m)
9 ft. 1 in. (2.77 m)
75 in. (1905 mm)

Extended
12 ft. 4 in. (3.76 m)
20 ft. 11 in. (6.38 m)
24 ft. 2 in. (7.37 m)
17 ft. 8 in. (5.39 m)
16 ft. 9 in. (5.11 m)
17 ft. 9 in. (5.41 m)
11 in. (282 mm)
160/179 degrees
11 ft. 5 in. (3.48 m)
23 ft. 3 in. (7.09 m)
6 ft. 7 in. (2.00 m)
7 ft. 4 in. (2.23 m)
8 ft. 5 in. (2.57 m)
9 ft. 1 in. (2.77 m)
75 in. (1905 mm)

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

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

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

<table>
<thead>
<tr>
<th>Width</th>
<th>Heaped Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cu. In.</td>
<td>Cu. Yd. (mm)</td>
</tr>
<tr>
<td>General purpose</td>
<td>81 (2057)</td>
</tr>
<tr>
<td>Long lip</td>
<td>89 (2266)</td>
</tr>
<tr>
<td>Standard-duty</td>
<td>12 (305)</td>
</tr>
<tr>
<td>16 (407)</td>
<td>3.6 (0.10)</td>
</tr>
<tr>
<td>18 (457)</td>
<td>4.1 (0.12)</td>
</tr>
<tr>
<td>24 (610)</td>
<td>6.0 (0.17)</td>
</tr>
<tr>
<td>30 (762)</td>
<td>7.9 (0.22)</td>
</tr>
<tr>
<td>36 (914)</td>
<td>9.9 (0.28)</td>
</tr>
<tr>
<td>Heavy-duty</td>
<td>18 (457)</td>
</tr>
<tr>
<td>24 (610)</td>
<td>6.0 (0.17)</td>
</tr>
<tr>
<td>24 (610)</td>
<td>7.5 (0.21)</td>
</tr>
</tbody>
</table>

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—10,000 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
- Deluxe interior trim package
- Deluxe heater w/fresh air intake—40,000 Btu/hr (11.7 kW)
- Special paint

*See your John Deere dealer for further information