### Specifications

**John Deere PowerTech® 6081H with altitude-compensating turbocharger and aircooler; meets North American EPA and CARB non-road diesel engine emission regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.**

**John Deere PowerTech® 6125A dual horsepower, turbocharged and aircooled; meets North American EPA and CARB non-road diesel engine regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.**

### Transmission

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>John Deere PowerTech® 6081H with altitude-compensating turbocharger and aircooler; meets North American EPA and CARB non-road diesel engine emission regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.</td>
</tr>
<tr>
<td></td>
<td>John Deere PowerTech® 6125A dual horsepower, turbocharged and aircooled; meets North American EPA and CARB non-road diesel engine regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.</td>
</tr>
</tbody>
</table>

### Axles/Brakes

<table>
<thead>
<tr>
<th>Final drives</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy-duty planetary, mounted inboard</td>
<td>John Deere PowerTech® 6081H with altitude-compensating turbocharger and aircooler; meets North American EPA and CARB non-road diesel engine emission regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.</td>
</tr>
<tr>
<td>Conventional front and rear – standard; hydraulic locking front, conventional rear – optional; dual locking front and rear – optional; limited slip front and rear – optional</td>
<td>John Deere PowerTech® 6125A dual horsepower, turbocharged and aircooled; meets North American EPA and CARB non-road diesel engine regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.</td>
</tr>
</tbody>
</table>

### Hydraulic System/Steering

<table>
<thead>
<tr>
<th>Pump (loader and steering)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable-displacement, axial piston pump; closed-center, pressure-compensating system</td>
<td>John Deere PowerTech® 6081H with altitude-compensating turbocharger and aircooler; meets North American EPA and CARB non-road diesel engine emission regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.</td>
</tr>
<tr>
<td>Two variable-displacement, load-sensing piston pumps; closed-center system</td>
<td>John Deere PowerTech® 6125A dual horsepower, turbocharged and aircooled; meets North American EPA and CARB non-road diesel engine regulations effective January 1, 1997; also is certifiable to proposed E.U. (European Union) regulations, which are not yet effective.</td>
</tr>
</tbody>
</table>

### Tires

<table>
<thead>
<tr>
<th>Choice of Width Width Over Tires</th>
<th>Change In Vertical Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.5-25, 12 PR L2</td>
<td>85.4 in. (2170 mm)</td>
</tr>
<tr>
<td>20.5-25, 12 PR L3</td>
<td>85.4 in. (2170 mm)</td>
</tr>
</tbody>
</table>
### Specifications/Dimensions

#### TIRES (continued)

<table>
<thead>
<tr>
<th>Choice of (continued)</th>
<th>644H MN</th>
<th>744H MN</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.5-25, 16 PR L3</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>20.5-25, XTLA L2 Michelin Radial</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>20.5-25, XTLA L3 Michelin Radial</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>21.5-25, 12 PR L2</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>21.5-25, 20 PR L3</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>23.5-25, GP-2B L2 Goodyear Radial</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>23.5-25, XHAT L3 Michelin Radial</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>26.5-25, 16 PR L2</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>26.5-25, 20 PR L3</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>26.5-25, GP-2B L2 Goodyear Radial</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>26.5-25, XHAT L3 Michelin Radial</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
<tr>
<td>26.5-25, X-MINE Michelin Radial*</td>
<td>85.4 in (2170 mm)</td>
<td>85.4 in (2170 mm)</td>
</tr>
</tbody>
</table>

#### Capacities (U.S.)

- **Fuel tank (with ground level fueling):** 90 gal. (341 L)
- **Cooling system:** 31 qt. (29 L)
- **Engine lubrication, including full-flow spin-on filter:** 26 qt. (25 L)
- **Power shift transmission, including vertical cartridge filter:** 27 qt. (26 L)
- **Differential (each axle):** 29 qt. (27 L)
- **Loader hydraulic reservoir and filters:** 31 gal. (117 L)
- **Parking brake:** 0.53 qt. (0.5 L)

#### Dimensions with Pin-on Type Bucket

1. **Height to top of cab and canopy:** 11 ft. 2 in. (3412 mm)
2. **Height to top of exhaust:** 11 ft. (3362 mm)
3. **Ground clearance:** 18.6 in. (473 mm)
4. **Length from centerline to front axle:** 5 ft. 3 in. (1600 mm)
5. **Wheelbase:** 10 ft. 6 in. (3200 mm)
6. **Dump height:** (see page 14)
7. **Height to hinge pin, fully raised:** 13 ft. 8 in. (4156 mm)
8. **Dump reach:** (see page 14)
9. **Maximum digging depth:** 2.7 ft. (699 mm)
10. **Overall length:** (see page 14)
11. **Maximum rollback at ground level:** 40 degrees
12. **Maximum rollback at full height:** 55 degrees
13. **Dump angle at SAT-raised dump height and reach:** 45 degrees
14. **Maximum dump angle at full height:** 50 degrees
15. **40' maximum dump angle with 5.75-cu. yd. (4.4 m') bucket:**

*Requires 8-degree rear axle stops.*
**644H MH PIN-ON TYPE BUCKET INFORMATION**

<table>
<thead>
<tr>
<th>Type/Size</th>
<th>Bucket</th>
<th>Operating Weight</th>
<th>Stockpiling and General Purpose</th>
<th>Stockpiling and General Purpose</th>
<th>Stockpiling and General Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity, heaped SAE</td>
<td>4.5 cu. yd.</td>
<td>4.5 cu. yd.</td>
<td>4.25 cu. yd.</td>
<td>4.25 cu. yd.</td>
<td>4.25 cu. yd.</td>
</tr>
<tr>
<td>(3.4 m³)</td>
<td>(3.4 m³)</td>
<td>(3.3 m³)</td>
<td>(3.3 m³)</td>
<td>(3.3 m³)</td>
<td>(3.3 m³)</td>
</tr>
<tr>
<td>Capacity, struck SAE</td>
<td>3.8 cu. yd.</td>
<td>3.8 cu. yd.</td>
<td>3.7 cu. yd.</td>
<td>3.7 cu. yd.</td>
<td>3.7 cu. yd.</td>
</tr>
<tr>
<td>(2.9 m³)</td>
<td>(2.9 m³)</td>
<td>(2.8 m³)</td>
<td>(2.8 m³)</td>
<td>(2.8 m³)</td>
<td>(2.8 m³)</td>
</tr>
<tr>
<td>Breakout force, SAE J732C</td>
<td>34,304 lb.</td>
<td>34,304 lb.</td>
<td>34,342 lb.</td>
<td>34,342 lb.</td>
<td>34,342 lb.</td>
</tr>
<tr>
<td>(15,576 kg)</td>
<td>(15,576 kg)</td>
<td>(15,618 kg)</td>
<td>(15,618 kg)</td>
<td>(15,618 kg)</td>
<td>(15,618 kg)</td>
</tr>
<tr>
<td>Tipping load, straight</td>
<td>30,906 lb.</td>
<td>30,906 lb.</td>
<td>30,933 lb.</td>
<td>30,933 lb.</td>
<td>30,933 lb.</td>
</tr>
<tr>
<td>(14,019 kg)</td>
<td>(14,019 kg)</td>
<td>(14,031 kg)</td>
<td>(14,031 kg)</td>
<td>(14,031 kg)</td>
<td>(14,031 kg)</td>
</tr>
<tr>
<td>Reach, 45-degree dump, 7-ft. (2.13 m)</td>
<td>25,860 lb.</td>
<td>25,860 lb.</td>
<td>26,023 lb.</td>
<td>26,023 lb.</td>
<td>26,023 lb.</td>
</tr>
<tr>
<td>(11,720 lb.)</td>
<td>(11,720 lb.)</td>
<td>(11,720 lb.)</td>
<td>(11,720 lb.)</td>
<td>(11,720 lb.)</td>
<td>(11,720 lb.)</td>
</tr>
</tbody>
</table>

---

**644H MH ADJUSTMENTS TO OPERATING WEIGHTS FOR PIN-ON BUCKETS**

Adjustments to operating weights and tipping loads for 4.5 cu. yd. (3.4 m³) material-handling bucket with bolt-on cutting edge

Add (+) or deduct (-) lb. (kg) as indicated for loaders with

- 20.5-25, 12 PR L2: 1,695 lb. (- 768 kg)
- 20.5-25, 16 PR L3: 1,576 lb. (- 715 kg)
- 20.5-25, XTLA L3 Michelin Radial: 1,922 lb. (- 827 kg)
- 20.5-25, XHAT L3 Michelin Radial: 1,605 lb. (- 728 kg)
- 23.5-25, 12 PR L3: 384 lb. (- 174 kg)
- 23.5-25, GP-2B L2 Goodyear Radial: 141 lb. (+ 64 kg)
- 23.5-25, XHAT L3 Michelin Radial: 364 lb. (+ 165 kg)
- Cat4L, 20.5-25 rear tires: 2,399 lb. (+ 1087 kg)

---

**S P E C I F I C A T I O N S**

**644H MH BUCKET SELECTION GUIDE**

![Diagram showing bucket selection guide](chart.png)

---

**Material Handling w/Bolt-on Cutting Edge**

- **Capacity, heaped SAE:** 4.5 cu. yd. (3.4 m³)
- **Capacity, struck SAE:** 3.8 cu. yd. (2.9 m³)
- **Breakout force, SAE J732C:** 34,304 lb. (15,576 kg)
- **Tipping load, straight:** 30,906 lb. (14,019 kg)
- **Reach, 45-degree dump, 7-ft:** 25,860 lb. (11,720 lb.)

**Stockpiling and General Purpose**

- **Operating Weight:**
  - 4.5 cu. yd.: 4,250 lb. (+ 1926 kg)
  - 3.8 cu. yd.: 3,716 lb. (+ 1682 kg)
  - Breakout force, SAE J732C: 34,342 lb. (15,618 kg)
  - Tipping load, straight: 30,933 lb. (14,031 kg)
  - Reach, 45-degree dump, 7-ft: 25,864 lb. (11,724 lb.)

---

**Material-Handling Bucket**

- **Operating Weight:**
  - 4.5 cu. yd.: 4,500 lb. (+ 2039 kg)
  - 3.8 cu. yd.: 4,000 lb. (+ 1810 kg)
  - Breakout force, SAE J732C: 34,340 lb. (15,614 kg)
  - Tipping load, straight: 30,930 lb. (14,029 kg)
  - Reach, 45-degree dump, 7-ft: 25,860 lb. (11,720 lb.)

---

**Stockpiling and General Purpose**

- **Operating Weight:**
  - 4.5 cu. yd.: 4,250 lb. (+ 1926 kg)
  - 3.8 cu. yd.: 3,716 lb. (+ 1682 kg)
  - Breakout force, SAE J732C: 34,342 lb. (15,618 kg)
  - Tipping load, straight: 30,932 lb. (14,031 kg)
  - Reach, 45-degree dump, 7-ft: 25,864 lb. (11,724 lb.)

---

**Stockpiling and General Purpose**

- **Material Handling w/Bolt-on Cutting Edge**
  - Capacity, heaped SAE: 4.5 cu. yd. (3.4 m³)
  - Capacity, struck SAE: 3.8 cu. yd. (2.9 m³)
  - Breakout force, SAE J732C: 34,300 lb. (15,571 kg)
  - Tipping load, straight: 30,906 lb. (14,019 kg)
  - Reach, 45-degree dump, 7-ft: 25,860 lb. (11,720 lb.)

---

**Material Handling w/Bolt-on Cutting Edge and Segments w/JagzTM**

- **Material Handling w/Bolt-on Cutting Edge and Segments w/JagzTM**
  - Capacity, heaped SAE: 4.5 cu. yd. (3.4 m³)
  - Capacity, struck SAE: 3.8 cu. yd. (2.9 m³)
  - Breakout force, SAE J732C: 34,300 lb. (15,571 kg)
  - Tipping load, straight: 30,906 lb. (14,019 kg)
  - Reach, 45-degree dump, 7-ft: 25,860 lb. (11,720 lb.)

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- Reach, 45-degree dump, 7-ft: 25,860 lb. (11,720 lb.)

---

**Cutting Edge and Segments w/JagzTM**

- **Cutting Edge and Segments w/JagzTM**
  - Capacity, heaped SAE: 4.5 cu. yd. (3.4 m³)
  - Capacity, struck SAE: 3.8 cu. yd. (2.9 m³)
  - Breakout force, SAE J732C: 34,300 lb. (15,571 kg)
  - Tipping load, straight: 30,906 lb. (14,019 kg)
  - Reach, 45-degree dump, 7-ft: 25,860 lb. (11,720 lb.)

---

**General and General Stockpiling**

- **Material Handling w/Bolt-on Cutting Edge**
  - Capacity, heaped SAE: 4.5 cu. yd. (3.4 m³)
  - Capacity, struck SAE: 3.8 cu. yd. (2.9 m³)
  - Breakout force, SAE J732C: 34,300 lb. (15,571 kg)
  - Tipping load, straight: 30,906 lb. (14,019 kg)
  - Reach, 45-degree dump, 7-ft: 25,860 lb. (11,720 lb.)

---

**General and General Stockpiling**

- **Material Handling w/Bolt-on Cutting Edge**
  - Capacity, heaped SAE: 4.5 cu. yd. (3.4 m³)
  - Capacity, struck SAE: 3.8 cu. yd. (2.9 m³)
  - Breakout force, SAE J732C: 34,300 lb. (15,571 kg)
  - Tipping load, straight: 30,906 lb. (14,019 kg)
  - Reach, 45-degree dump, 7-ft: 25,860 lb. (11,720 lb.)
ADJUSTMENTS TO OPERATING WEIGHTS FOR PIN-ON BUCKETS

Adjustments to operating weights and tipping loads for 5.75 cu. yd. (4.4 m³) material-handling bucket with bolt-on cutting edge

Add (+) or deduct (-) lb. (kg) as indicated

<table>
<thead>
<tr>
<th>Bucket Type/Size</th>
<th>Material Handling w/Bolt-on Cutting Edge</th>
<th>Material Handling w/Teeth and Segments</th>
<th>Stockpiling and General Purpose w/Bolt-on Cutting Edge</th>
<th>Stockpiling and General Purpose w/Teeth and Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacity, heaped SAE (4.4 m³)</td>
<td>Capacity, struck SAE (4.4 m³)</td>
<td>Operating weight (51,590 lb. (23,415 kg))</td>
<td>Operating weight (51,590 lb. (23,415 kg))</td>
</tr>
<tr>
<td></td>
<td>5.75 cu. yd.</td>
<td>5.00 cu. yd.</td>
<td>51,590 lb.</td>
<td>51,590 lb.</td>
</tr>
<tr>
<td></td>
<td>(3.8 m³)</td>
<td>(3.8 m³)</td>
<td>(23,400 kg)</td>
<td>(23,400 kg)</td>
</tr>
<tr>
<td>Bucket width</td>
<td>128.9 in. (3275 mm)</td>
<td>128.9 in. (3275 mm)</td>
<td>45 ft. 10 in.</td>
<td>45 ft. 10 in.</td>
</tr>
<tr>
<td>Breakout force, SAE J732C</td>
<td>37,175 lb.</td>
<td>37,175 lb.</td>
<td>37,175 lb.</td>
<td>37,175 lb.</td>
</tr>
<tr>
<td>Tipping load, straight</td>
<td>36,310 lb.</td>
<td>36,310 lb.</td>
<td>36,310 lb.</td>
<td>36,310 lb.</td>
</tr>
<tr>
<td>Tipping load, 35-degree full turn, SAE</td>
<td>31,210 lb.</td>
<td>31,210 lb.</td>
<td>31,210 lb.</td>
<td>31,210 lb.</td>
</tr>
<tr>
<td>Tipping load, 40-degree full turn, SAE</td>
<td>30,050 lb.</td>
<td>30,050 lb.</td>
<td>30,050 lb.</td>
<td>30,050 lb.</td>
</tr>
<tr>
<td>Reach, 45-degree dump, carry position</td>
<td>45 ft. 10 in.</td>
<td>45 ft. 10 in.</td>
<td>45 ft. 10 in.</td>
<td>45 ft. 10 in.</td>
</tr>
<tr>
<td>Reach, 45-degree dump, full height</td>
<td>46.4 in.* (1178 mm)</td>
<td>46.4 in.* (1178 mm)</td>
<td>46.4 in.* (1178 mm)</td>
<td>46.4 in.* (1178 mm)</td>
</tr>
<tr>
<td>Overall length</td>
<td>28 ft. 11 in. (9825 mm)</td>
<td>28 ft. 11 in. (9825 mm)</td>
<td>28 ft. 11 in.</td>
<td>28 ft. 11 in.</td>
</tr>
<tr>
<td>Loader clearance circle, bucket in carry position</td>
<td>46 ft. 10 in. (13,965 mm)</td>
<td>46 ft. 10 in. (13,965 mm)</td>
<td>46 ft. 10 in. (13,965 mm)</td>
<td>46 ft. 10 in. (13,965 mm)</td>
</tr>
<tr>
<td>Operating weight</td>
<td>51,590 lb. (23,415 kg)</td>
<td>51,590 lb. (23,415 kg)</td>
<td>51,590 lb.</td>
<td>51,590 lb.</td>
</tr>
<tr>
<td></td>
<td>(23,400 kg)</td>
<td>(23,400 kg)</td>
<td>(11,660 kg)</td>
<td>(11,660 kg)</td>
</tr>
</tbody>
</table>

*This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.

744H MH PIN-ON TYPE BUCKET INFORMATION

- 5.75 cu. yd. (4.4 m³) material-handling bucket with bolt-on cutting edge
- Operating weight: 51,590 lb. (23,415 kg)
- Breakout force: 37,175 lb. (16,860 kg)
- Tipping load: 36,310 lb. (16,470 kg)
- Reach, 45-degree dump, full height: 49.6 in.* (126.1 in.)*
- Operating Weight Tipping Load, Straight 35-Degree Full Turn 40-Degree Full Turn
  - Tipping Load, Straight: 80.2 lb. (36.4 kg)
  - Tipping Load, 35-Degree Full Turn: 32,755 lb. (14,857 kg)
  - Tipping Load, 40-Degree Full Turn: 30,420 lb. (13,510 kg)

744H MH BUCKET SELECTION GUIDE

- Material Handling w/Bolt-on Cutting Edge
- Material Handling w/Teeth and Segments
- Stockpiling and General Purpose w/Bolt-on Cutting Edge
- Stockpiling and General Purpose w/Teeth and Segments

- Buckets for loaders with 26.5-25, 16PR12 tires:
  - XHAT L3 Michelin Radial + 397 lb. (+180 kg)
  - 26.5-25, XHAT L3 Michelin Radial + 397 lb. (+180 kg)
  - 26.5-25, X-MINE Michelin Radial + 2,875 lb. (+1300 kg)
  - CaCl₂ in rear tires + 2,875 lb. (+1300 kg)

- Material Handling and General Purpose Buckets
- Deere 5.75 cu. yd. (4.4 m³) Material-Handling Bucket
- Deere 5.25 cu. yd. (3.8 m³) Stockpiling and General-Purpose Bucket

- Bucket size vs. load capacity graph
- Breakout force: 37,175 lb. (16,860 kg)
- Tipping load: 36,310 lb. (16,470 kg)

- Operating Weight Tipping Load, Straight 35-Degree Full Turn 40-Degree Full Turn
  - Tipping Load, Straight: 80.2 lb. (36.4 kg)
  - Tipping Load, 35-Degree Full Turn: 32,755 lb. (14,857 kg)
  - Tipping Load, 40-Degree Full Turn: 30,420 lb. (13,510 kg)

- Breakout force: 37,175 lb. (16,860 kg)
- Tipping load: 36,310 lb. (16,470 kg)
- Reach, 45-degree dump, full height: 49.6 in.* (126.1 in.)*

*This guide, representing bucket sizes not necessarily manufactured by Deere, will help you in selecting proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. The "conservative load" line on this guide is recommended when operating in conditions such as soft ground and unlevel surfaces. The "maximum load" condition on this guide is sometimes utilized when operating on firm ground and level surfaces.